THE CHALLENGE OF THE SINGLE EUROPEAN MARKET 1992 AND BEYOND

INPUT

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Abstract

This report examines the impact of the Single European Act on the Western European computer software and services market. It covers the historical development of the concept of the European Single Market and the planned changes to remove crucial barriers to business within the European Economic Community's 12 national borders.

The report reviews the structure of the EEC and the specific programmes created to assist the computer software and services industry. The impact of the regulatory and legislative changes planned within the overall programme of the Single European Act is analysed. The report looks at how these changes are likely to affect businesses in general throughout the EEC, and specifically what opportunities it should create for the computer software and services vendors.

The report analyses the total EEC computer software and services market by type of vendor, nationality and size of enterprise. It analyses what the current penetration by foreign vendors is by each EEC country and discusses how this might change in the 1990s through the effects of the Single European Act.

The report discusses vendor responses to this changing environment. It investigates their attitudes towards the Single European Act and 1992, and it looks at what they see as the problems to breaking down the traditional barriers within Europe. It reviews the key trends of vendor actions in response to 1992 that can already be identified, and discusses possible strategies that may well be taken by different types of vendors.

Forecasts are provided of the expected growth of the computer software and services industry through the period 1989 to 1994 in each of the EEC countries. The development of these markets and the degree to which a common European market may emerge is discussed, particularly with reference to different sizes and types of vendors.

Recommendations are made to vendors looking to expand in the 1990s within the EEC. The concept of "fortress Europe" is discussed and how this might affect non-European vendors, specifically U.S. and Japanese.

The report contains 292 pages, including 170 exhibits.

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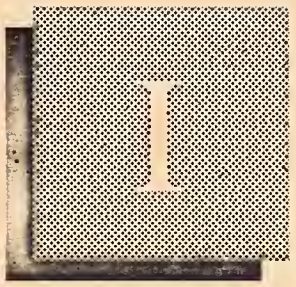

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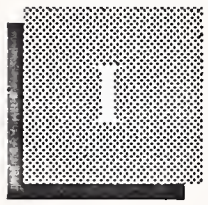

Introduction

This report has been produced in response to the need for a clear assessment of the impact of the Single European Act and its effects on the future development of the computer software and services industry in Western Europe. This chapter sets out the scope of this report and the research methodology used by INPUT to produce this report.

A Scope of the Report

This report reviews the Single European Act as signed by the acting heads of state of the European Economic Community members in February 1986, and its likely impact on the EEC software and services market. It reviews the political developments that led up to the Single European Act and the general economic impact that it is expected to have on the 12 member states that constitute the EEC today.

The report specifically reviews the software and services market for the 12 member states of the EEC by country:

- Belgium
- Denmark
- France
- Greece
- Ireland
- Italy
- Luxembourg
- Netherlands
- Portugal
- Spain
- U.K.
- West Germany

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The report does not cover the other markets of Western Europe in depth, but comments on the likely effect of the Single European Act on them. These countries are generally referred to as the EFTA countries, and are:

- Austria
- Finland
- Iceland
- Norway
- Sweden
- Switzerland

It also analyses the overall EEC information services market by INPUT's definition of the computer software and services market:

- Processing services
- Network services
- Software products
- Systems integration
- Professional services
- Turnkey systems

The report also covers the likely effect of the Single European Act on the customer services market, the sector related to the service of equipment. Since the impact on this sector is not expected to be significant, it is not covered in depth in this report.

The report is designed to assist vendors in:

- Understanding the political events that led up to the Single European Act and hence the aspirations of the EEC for the 1990s
- Appreciating the likely impact of the Single European Act on the business environment in the EEC during the 1990s
- Recognizing that the Single European Act legislation is gradually being passed and ratified by member states and that 1992 is only a target date — of more importance to the media than to business
- Identifying the key differences between the software and services markets of the 12 member states
- Appreciating the strength of U.S. vendors within the 12 member states
- Understanding which EEC vendors are strongest and most likely to exploit the opportunities created by the Single European Act
- Considering the various opportunities that the Single European Act should create for the software and services industry

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- Obtaining insights into the attitudes of other vendors towards the Single European Act and the 1990s

- Deciding upon appropriate actions to be taken in the 1990s in the EEC

The report reviews the current size of the EEC computer software and services market in 1988 and 1989, and presents forecasts by market sector and member state to 1994.

When reviewing the market for software and services for different member states, Luxembourg is included with Belgium. Because of the small size of the markets in Greece, Ireland and Portugal, these are not covered in depth and are grouped together.

In considering the growth of different market sectors between 1989 and 1994, average growth rates have been calculated and are shown as CAGRs (compound annual growth rates).

B

Methodology

This report is based on the following research undertaken by INPUT during 1989:

- Background research on the Single European Act and its expected impact on the general business environment in the EEC

- A specific vendor research programme to gauge vendor attitudes to the Single European Act. This covered 80 European vendors, and was conducted according to a specific sampling pattern, illustrated in Exhibit I-1, using the questionnaire shown in Appendix E

- A vendor research programme conducted by INPUT which included interviews of over 350 software and services vendors within the EEC so as to size the EEC software and services market, as part of INPUT's annual research programme

- INPUT's continuous research into the computer software and services industry of Western Europe

Individual country markets in this report have been assessed in local currencies and have been converted into U.S. dollars and ECUs (European Currency Units) using the single set of exchange rates given in Appendix C. So as not to distort local growth rates through exchange rate fluctuations, the same exchange rates have been used for all years.

Inflation has not been eliminated from either historical or future market forecasts. All estimates of end-user revenues and market sizes are therefore in real values, and if readers wish to exclude inflation effects, estimates of 1989 inflation for individual EEC countries are given in Appendix C.

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EXHIBIT I-1

Analysis of Vendor Interviews

Country of Vendor (Software and Services) and Nationality of Vendor (Customer Services)	Number of Interviews
Software and services vendors	
- Benelux	2
- Denmark	6
- France	9
- Italy	10
- Spain	7
- U.K.	14
- West Germany	12
Total	60
Customer service vendors	
- European-owned	7
- U.S.-owned	13
Total	20
Overall	80

C

Report Structure

The remaining chapters of this report are organised as follows:

- Chapter II is an Executive Overview, providing a summary of the entire report.
- Chapter III gives the background to the development of the Single European Act.
- Chapter IV looks at the likely impact of the Single European Act on the general business environment, and in particular on end users and vendors of computer software and services.

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- Chapter V discusses the attitudes of vendors towards the Single European Act for Europe, as identified by INPUT in its research.

- Chapter VI discusses the structure of the EEC computer software and services market, and forecasts the size of this market by individual member state and delivery mode for the period 1988 through 1994.

- Chapter VII considers the likely actions that software and services vendors will take in response to the Single European Act. It illustrates these trends through relevant INPUT research into vendor attitudes towards these developments.

- Chapter VIII makes recommendations to vendors for the 1990s. It looks at the different types of vendors active in the EEC market, and gives specific recommendations by type.

- Appendix A gives INPUT's definitions of terms used in this report.

- Appendix B gives INPUT's definition of the computer software and services industry structure.

- Appendix C gives the exchange rates used in converting local currencies to U.S. dollars and ECUs, and estimates of 1989 country inflation rates.

- Appendix D gives forecasts for the period 1988 to 1994 by EEC member state and by delivery mode, in U.S. dollars and ECUs.

- Appendix E reproduces the vendor questionnaire used during INPUT's research for this report.

- Appendixes F-L give relevant background on the EEC and EEC-funded programmes.

D

Related INPUT Reports

Readers may find it useful to refer to the following INPUT reports, which relate to the findings of this report:

- Overall Western European market review

  The Western European Market for Computer Software and Services, Forecast and Analysis, 1989-1994 (December 1989)

- Delivery Mode market reviews

  Commercial Systems Integration — Western Europe, 1988-1993 (December 1988)

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EDI Intertrends — Western Europe, 1989-1994 (July 1989)

Turnkey Systems Opportunities — Western Europe, 1989-1994 (November 1989)

The Western European Market for Electronic Information Services, 1989-1994 (December 1989)

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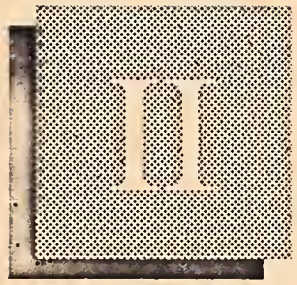
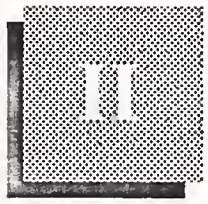


Executive Overview



Executive Overview

A Globalization

The development of the European Economic Community (EEC) is part of a global trend towards larger trading groups. For the business community this creates new opportunities to gain from economies of scale. For these groups of sovereign states, it gives the opportunity to foster more competitive national companies which can succeed in world markets.

In 1986, the heads of state of the 12 member nations of the EEC signed the Single European Act with the objective of gradually breaking down the traditional, national barriers between them and moving towards a single European market. This momentous decision will affect every individual and business enterprise in the EEC.

It has already led to a growing wave of mergers and acquisitions throughout European business. The gradual evolution of new pan-European markets in the 1990s will force businesses to change old strategies and to redesign and restructure products and services.

In the computer software and services industry, the changes will be profound. As new pan-European markets open up for different end-user groups, traditional national software and services vendors will have to respond by becoming more pan-European. However, the European software and services industry is a mix of some 25,000 small to medium-sized vendors who have traditionally operated in only one country, some 5,000 vendors who may have tentatively moved into neighbouring markets, and only some 200 vendors who are truly international.

These international vendors are disproportionately large, generating 100 to 1,000 times the revenue of traditional national vendors. They are ideally placed to take full advantage of the evolution of a single European market. However, there is a mix between manufacturers that are truly

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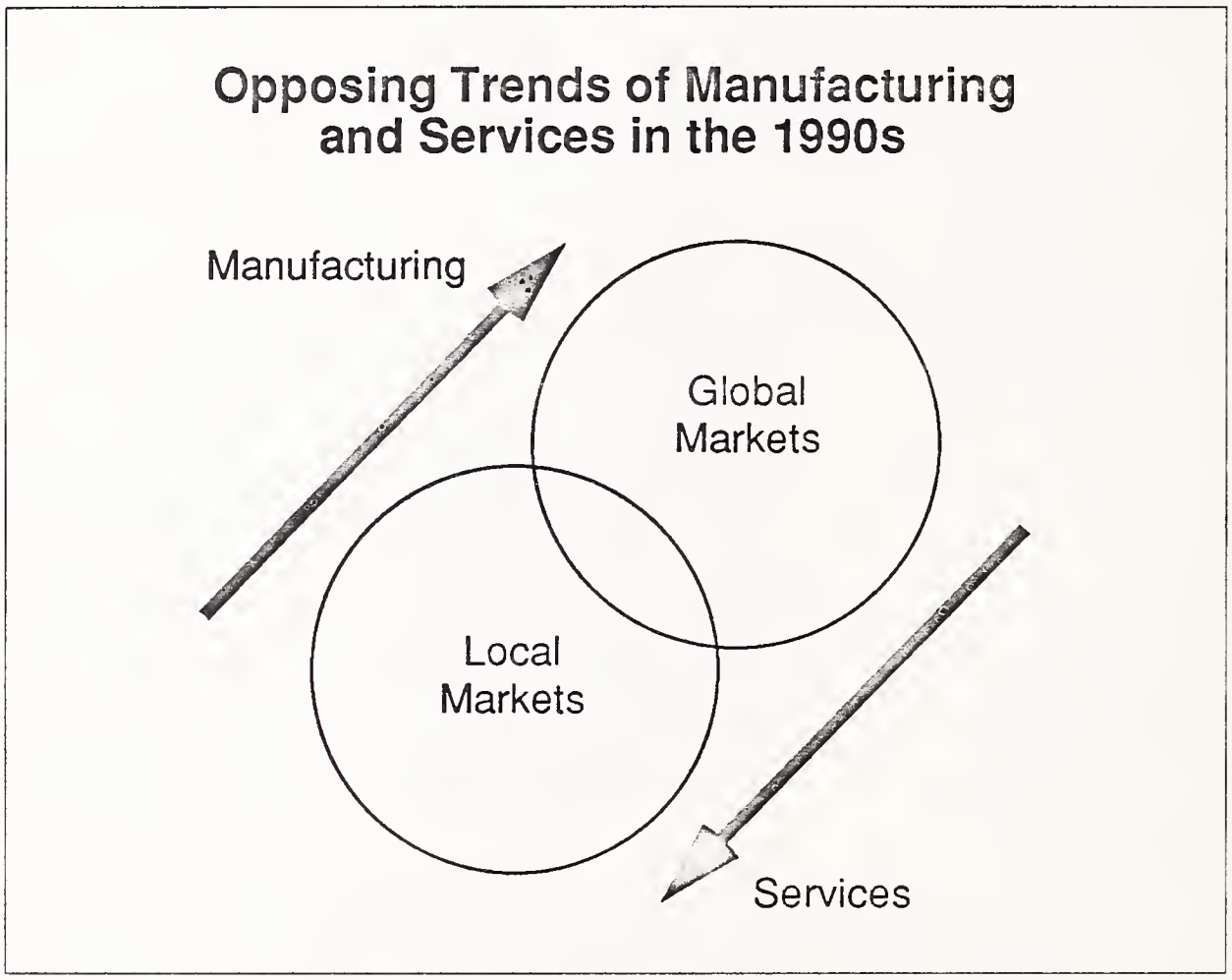
global, like IBM, and specialists in services, like Cap Gemini Sogeti, which is structured to continue to service national, or even local, clients.

As Exhibit II-1 illustrates, manufacturing is tending to become more global, and services more local. As a result of these opposing trends, the effect of the Single European Act on the software and services industry in the EEC will be extremely complex. To understand the likely effect and its timing, each market segment needs to be studied separately.

EXHIBIT II-1



The principal thrust of the Single European Act is to create larger and more pan-European markets. INPUT therefore believes that U.S. vendors are better positioned to take advantage of many of these new pan-European market segments than many of their European competitors.

There are only three EEC member states with software and services vendors who are major exporters — France, U.K. and West Germany. Major vendors from France and the U.K. tend to be service, rather than product-orientated. INPUT sees that these vendors are in a strong position to defend their future EEC markets. However, West German vendors and many small national vendors around the EEC are product-orientated, hence potentially vulnerable to competition from U.S. vendors.

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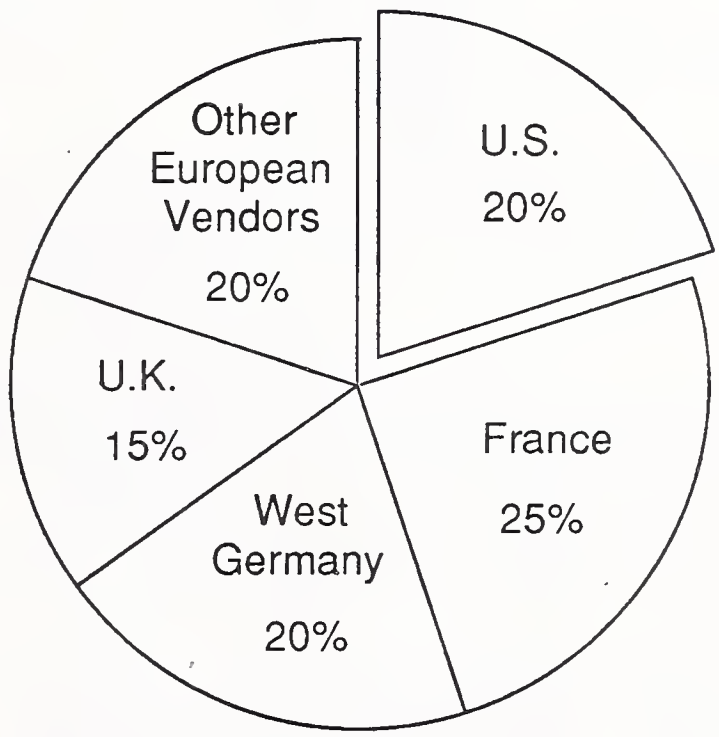
As Exhibit II-2 illustrates, in 1989, U.S. vendors obtained around 20 percent of total EEC end-user software and services revenues. They were the second only to the French as the largest national grouping of vendors operating in the EEC, and during the 1990s they could become the leading vendor group.

EXHIBIT II-2

EEC Software and Services Market by Leading Vendor Nations, 1989



Total EEC Market (1989) = $44.1 Billion

Overall, INPUT forecasts that the EEC software and services market will grow from $44.1 billion in 1989, to $104.4 billion in 1994, as Exhibit II-3 indicates. This represents a 19 percent average growth rate over this five-year period. In addition to the possibility of U.S. vendors increasing their market share in the EEC, INPUT also sees a number of global EEC computing services companies emerging from Europe. Vendors such as Cap Gemini Sogeti, Sema Group and SD-Scicon will continue to benefit from the larger trading blocs being created through the Single European Act and will play a leading role in global, not just European, markets.

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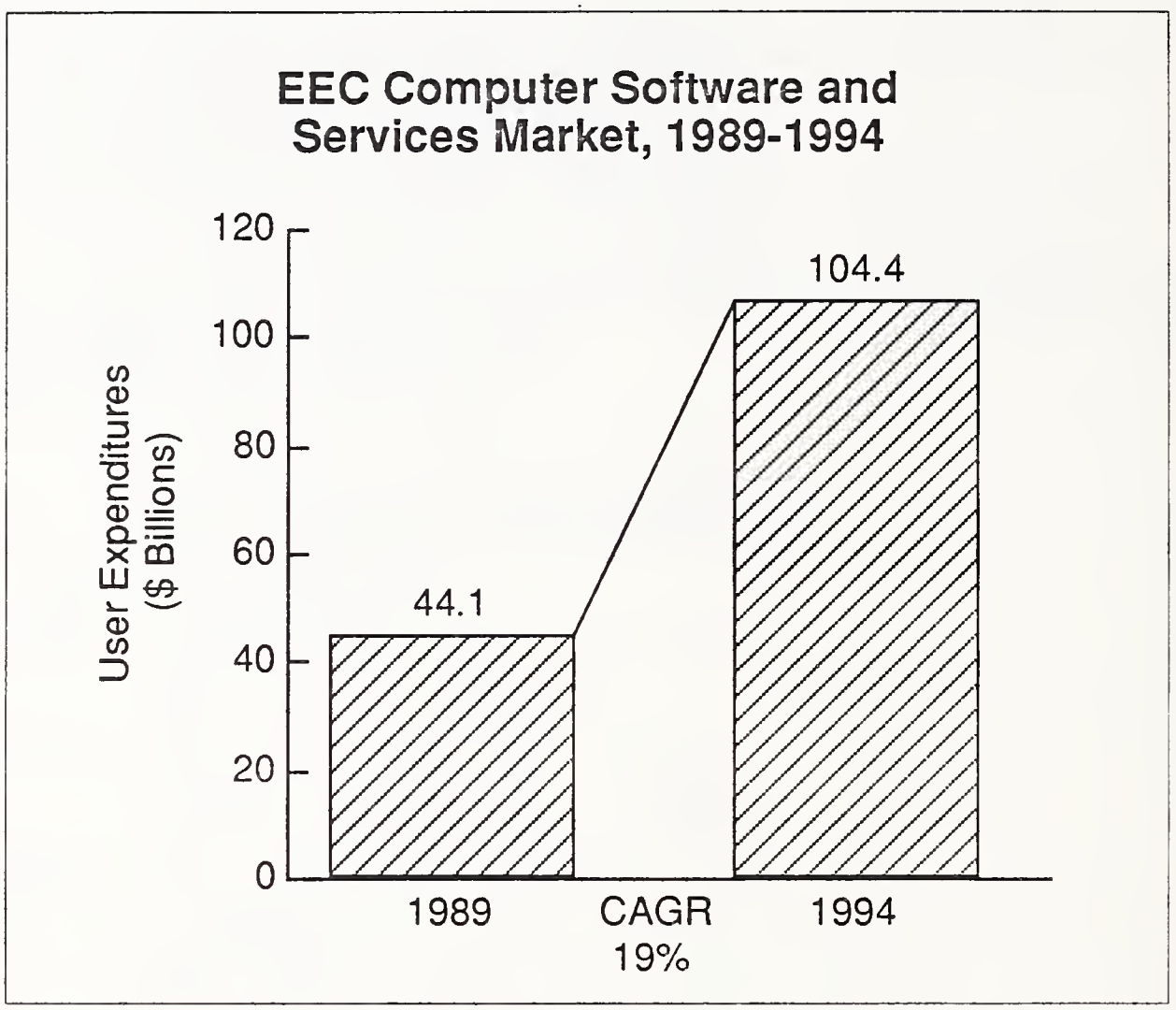
EXHIBIT II-3



B

The Single European Act

The signing of the Single European Act was the culmination of some 40 years of political negotiations and compromise. Some of the key stages are listed in Exhibit II-4.

The principal objective of the Single European Act is to break down the traditional national barriers within the EEC by reducing:

- physical barriers
- technical barriers
- fiscal barriers

To do this, the Act set out 279 directives to be covered by specific legislation at a later date. December 31, 1992 was set as the target for the completion of this legislative programme. As of September 1989, only 130 of these directives had been adopted by the Council of Ministers, and only 63 of these had taken effect.

It is accepted that all the Single European Act legislation cannot be passed by the beginning of 1993. The process of agreeing and enacting the remaining directives will continue into the mid to late 1990s. The

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EXHIBIT II-4

History of the Single European Act

- 1946 Churchill calls for a United States of Europe
- 1951 European Coal and Steel Community (ECSC) created under the presidency of Jean Monnet
- 1957 Treaty of Rome signed by six members of ECSC
- 1958 EEC comes into being with six member states
- 1960 EFTA formed by seven European nations not in the EEC
- 1973 U.K. leaves EFTA and joins EEC, together with Denmark and Ireland, to enlarge EEC to nine member states
- 1974 European Council established
- 1979 Greece joins EEC to make ten member states
  First elections of the European Parliament
- 1985 Cockfield White Paper on the creation of a single European market
- 1986 Spain and Portugal join EEC to make 12 member states
  Single European Act signed

creation of a single European market will not be a sudden event, as some might have originally thought.

C

Impact of the Software and Services Industry

The implementation of the Single European Act will be spread over at least a decade. It is not possible today to foresee exactly what the impact will be on the overall software and services market, or on specific market sectors.

INPUT's research into vendor attitudes has identified various market sectors that vendors see as the most likely to be affected. These are shown in Exhibit II-5.

Banking and finance is seen by vendors as the sector most likely to be affected. The next most-affected sectors will probably be manufacturing and government. One of the objectives of the Single European Act is to

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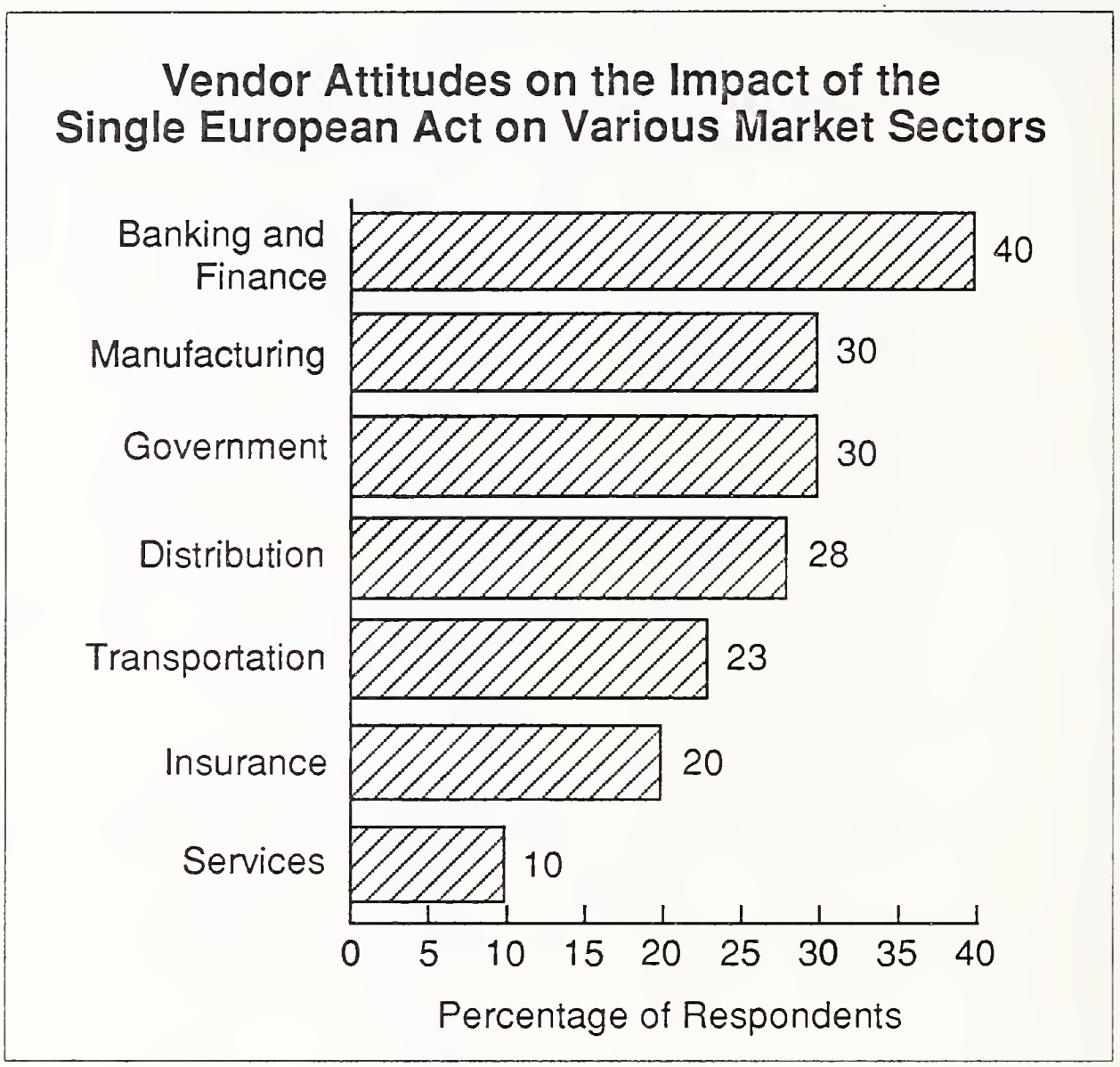
EXHIBIT II-5



open up public sector procurement. In the past, national and local governments of member states have openly favoured domestic suppliers. For example, the French local authorities purchased only Bull equipment until a few years ago.

Vendors involved in government markets told INPUT that member states were already opening up tenders to other EEC nations. Benefits were identified for professional service vendors, systems integrators and network services vendors.

D

Opportunities and Threats

Implementation of specific Single European Act legislation will not necessarily be introduced simultaneously by all member states. Different national groupings within the EEC may therefore have certain barriers reduced before others.

Those business enterprises in countries which immediately implement the relevant legislation should be the first to benefit. As they expand to exploit the new and larger markets, the traditional, national software and

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services vendors who have served them should also be able to take advantage of any opportunities before others.

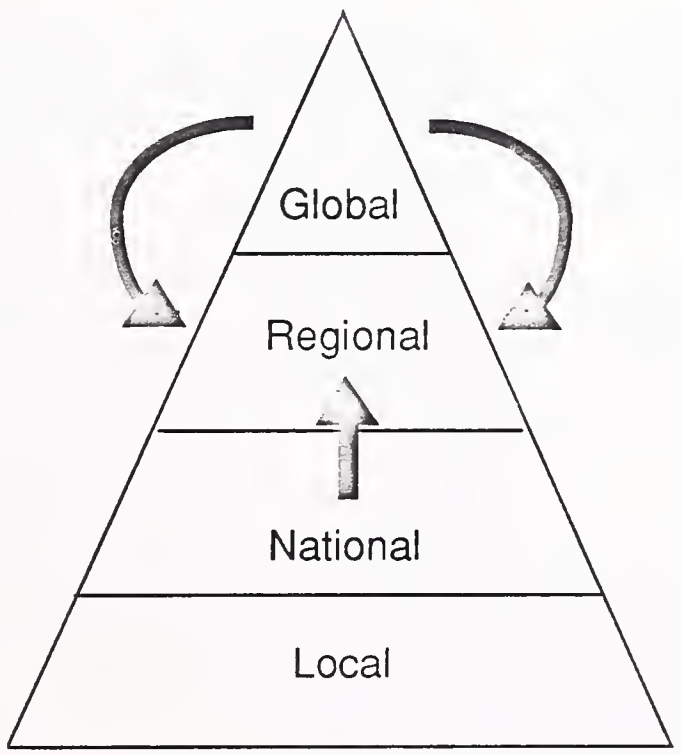
The effect of the Single European Act on specific market sectors will vary from member state to member state. This will be partly because each country may implement the relevant legislation at different times. It will also be due to the strength of business enterprises and software and services vendors, which differs from country to country for each business sector.

For the traditional national software and services vendor, the Single European Act should offer major opportunities in those market sectors where domestic businesses are already strong in a European context. The U.K. is strong in banking, finance and insurance. West Germany's strength is in manufacturing. France is strong in services, such as rail transport, and the Netherlands in road transport.

Exhibit II-6 illustrates that for these vendors there should be new opportunities, as their markets expand from just being national to covering a region, or the whole of the EEC. However, there is the threat that, once the small national vendor has opened up the wider regional markets, the global players will move in and take them over.

EXHIBIT II-6

Opportunities and Threats in New Pan-European Markets



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Each of the four nationalities of vendors involved in exporting within the EEC — France, the U.K., West Germany and the U.S. — has its own strengths. The French are strong in logical thinking, and hence in bespoke software. The British are good at a strategic, organisational level, and so software and services vendors are strong in strategic consultancy, systems integration and facilities management. The West Germans lead Europe in their engineering skills, and so are strong in software products and turnkey systems.

One of the main strengths of many U.S. vendors in the EEC is their existing pan-European coverage and established pan-European organisations. Those markets needing more of a centralised manufacturing approach, rather than a distributed, local approach will provide an opportunity to U.S. vendors, who are already strong in certain EEC software and services markets such as:

- international network services

- nonproprietary operating software
  - UNIX
  - MS/DOS

- certain applications software products
  - CAD/CAM
  - word processing for PCs
  - spreadsheets for PCs
  - databases for PCs

E

Inhibitors to a Single European Market

As Exhibit II-7 illustrates, INPUT's research discovered that vendors see language as the most important potential inhibitor to the development of a single European market.

Within the EEC there are nine different business languages spoken in the 12 member states. To export applications software from country to country, screens and documentation have to be translated. To export any product or service, promotional material not only has to be in the local language, but has to be rewritten to be culturally acceptable.

Many European vendors have introduced kernel products with national characteristics parameterized. The most difficult application area will continue for many years to be taxation, as governments do not wish to give up their control over when and by how much to change taxes.

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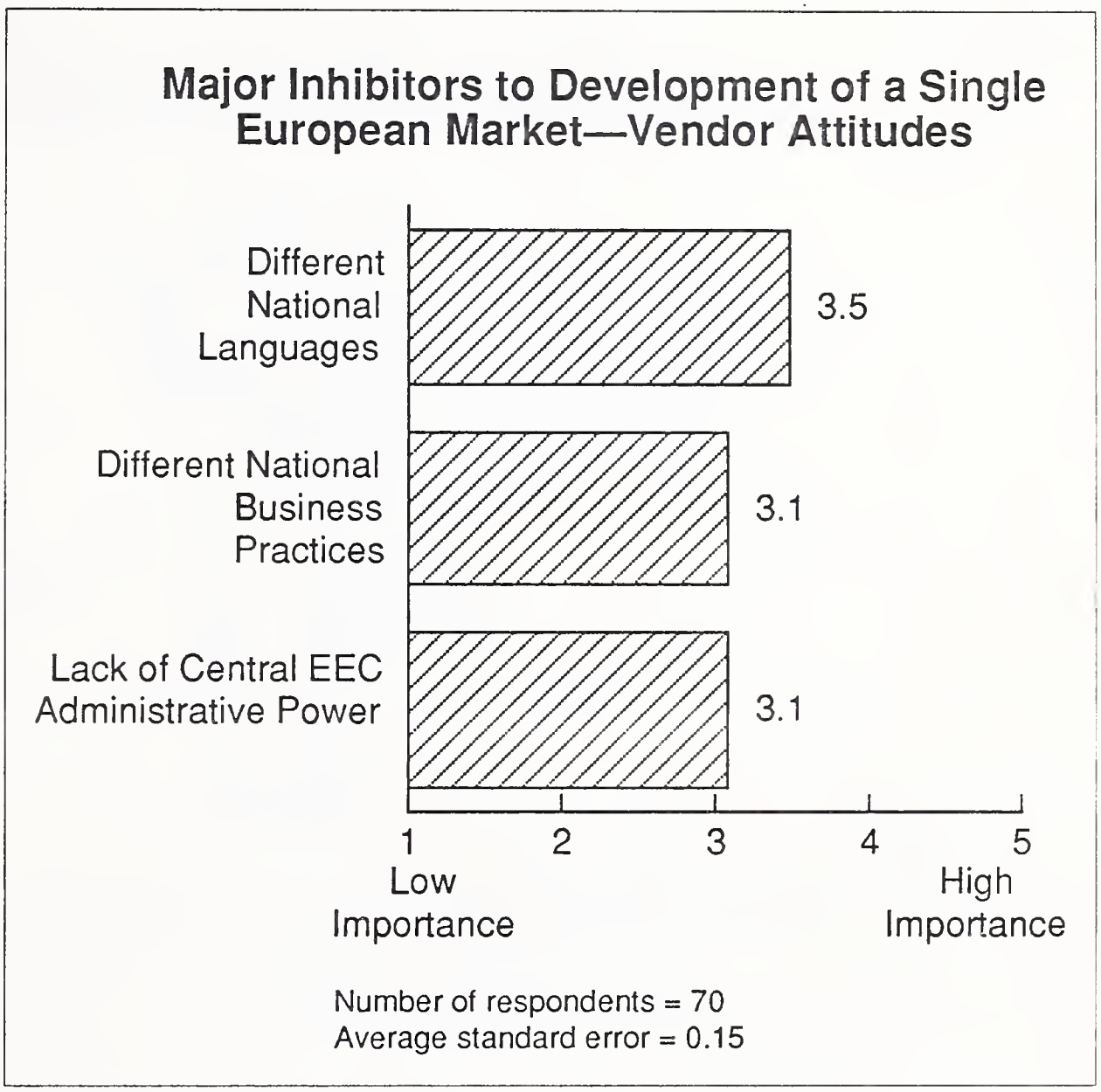
EXHIBIT II-7



F

Foreign Competition

INPUT's analysis of the EEC software and services market shows a significant variation in foreign competition between different member states. Exhibit II-8 summarises this work.

France has the lowest penetration by foreign competitors, at only 18 percent, whilst Spain has the highest, at 64 percent. The U.K. also has a very high level of foreign vendor involvement — 38 percent. The U.K. market is the most active, both in terms of the number of foreign vendors and in mergers and acquisitions.

The U.K. has traditionally been the first location used by U.S. vendors for expansion into Europe. However, with the centre of the EEC focused on Belgium and Brussels, non-European vendors are now looking to move their European headquarters to Belgium, or to the neighbouring Netherlands, where company taxation is very favourable.

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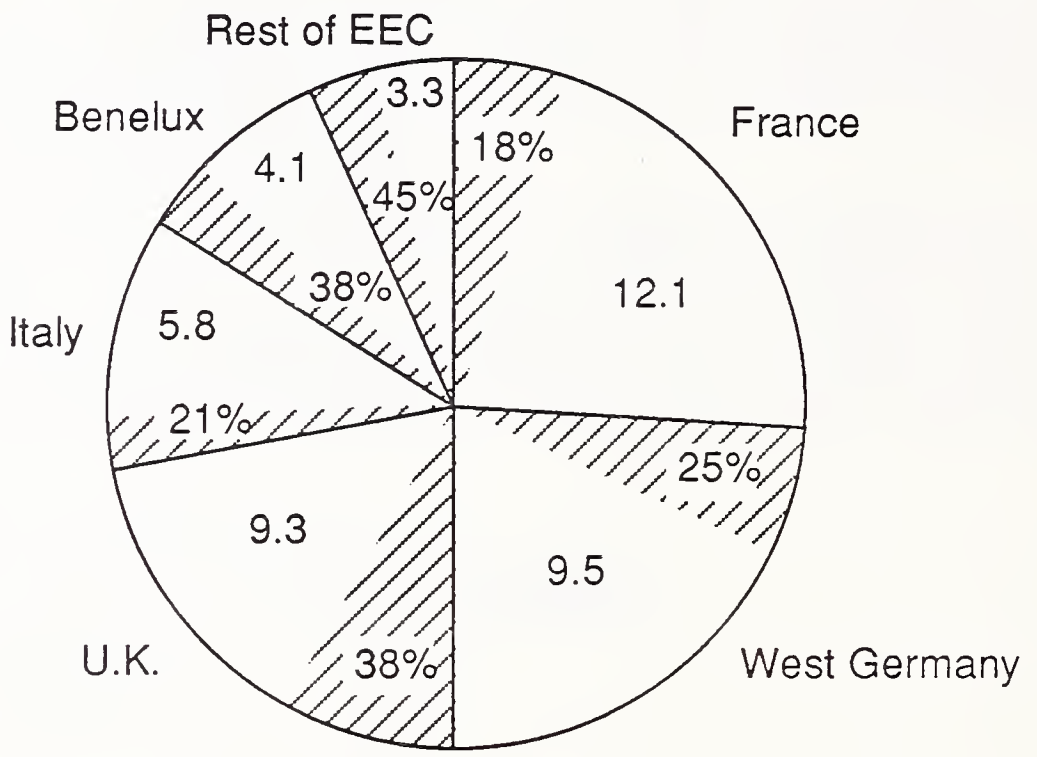
EXHIBIT II-8

Analysis of EEC Software and Services Market by Foreign Penetration of National Markets



Total EEC Market (1989) = $44.1 Billion

Three-quarters of the foreign competition on average in EEC member states is from U.S., not European vendors. This means that U.S. vendors are already three times more successful in exporting around the EEC than are domestic European vendors. This existing strength of U.S. vendors in the software and services market is mirrored in other EEC markets. The European Commission is considering measures to temporarily protect domestic industries against stronger non-EEC competition.

The idea of introducing some protectionist measures for EEC enterprises during the period when the Single European Act opens up national markets has raised the spectre of "Fortress Europe." Both the U.S. and Japan are against this, and are lobbying Brussels to stop it.

G

Actions for the 1990s

INPUT's research has revealed that some 75 percent of vendors interviewed have already taken some form of action as a result of the Single European Act. (See Exhibit II-9.)

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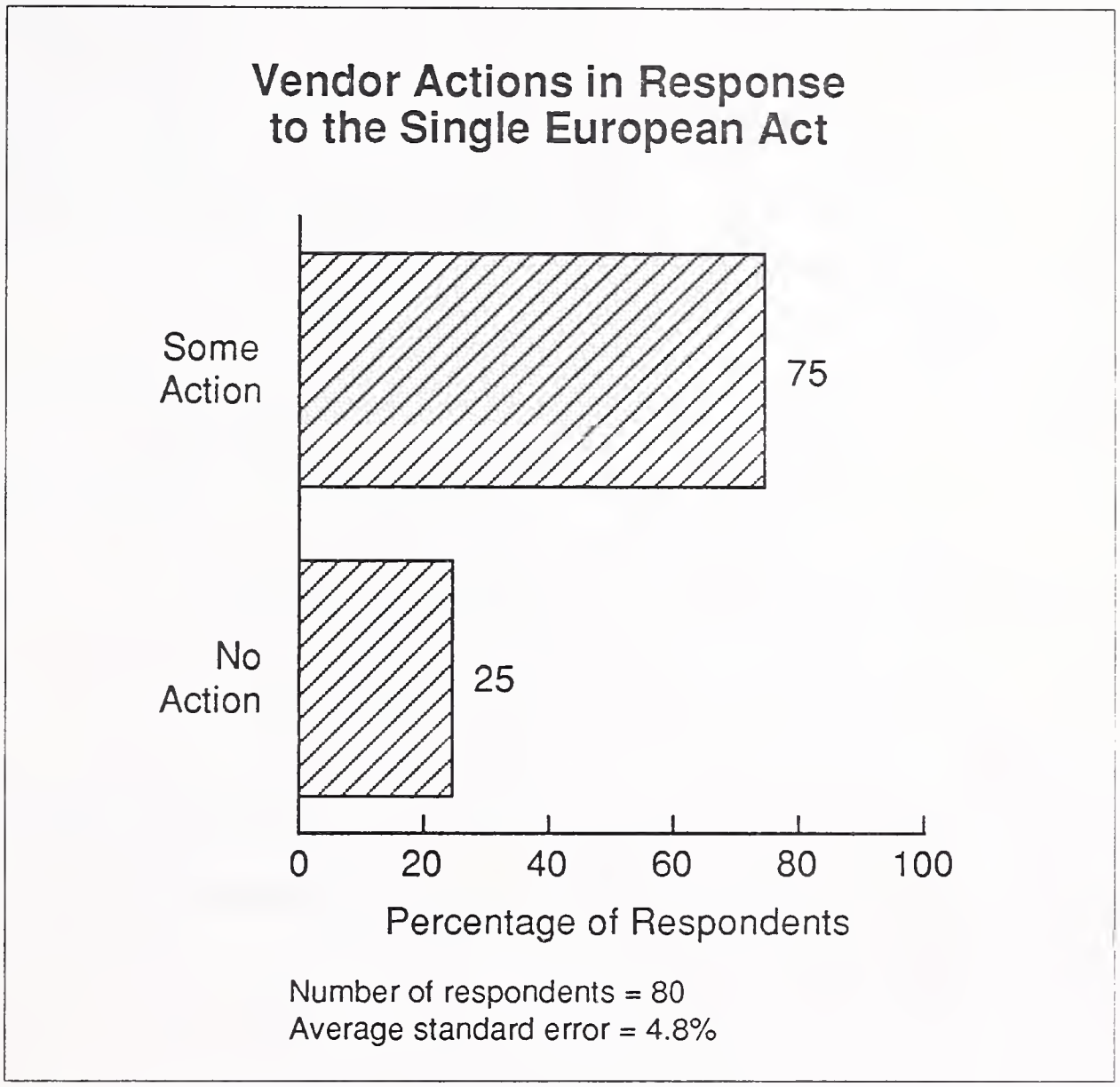
EXHIBIT II-9



The majority of this action has been in revising product and services designs. Changing marketing strategy is also important. Vendors providing customer services related to equipment see that reduction of customs controls will allow them to rationalize their spare parts strategy and reduce costs and time in servicing customers. Independent software products vendors who wish to export services are seeking distributors in other member states.

Exhibit II-10 summarises INPUT's key recommendations to EEC vendors for the 1990s. INPUT strongly believes that it is essential for vendors to stay in close touch with Brussels. Many vendors interviewed did not fully appreciate the excellent work that the European Commission staff is doing in Brussels.

The only way to monitor likely development in Single European Act legislation is via Brussels. When vendors were asked by INPUT what was the most important issue facing them today, they stated that it was the 1992 initiative of the European Commission. However, INPUT's research indicates that many vendors seem preoccupied with domestic

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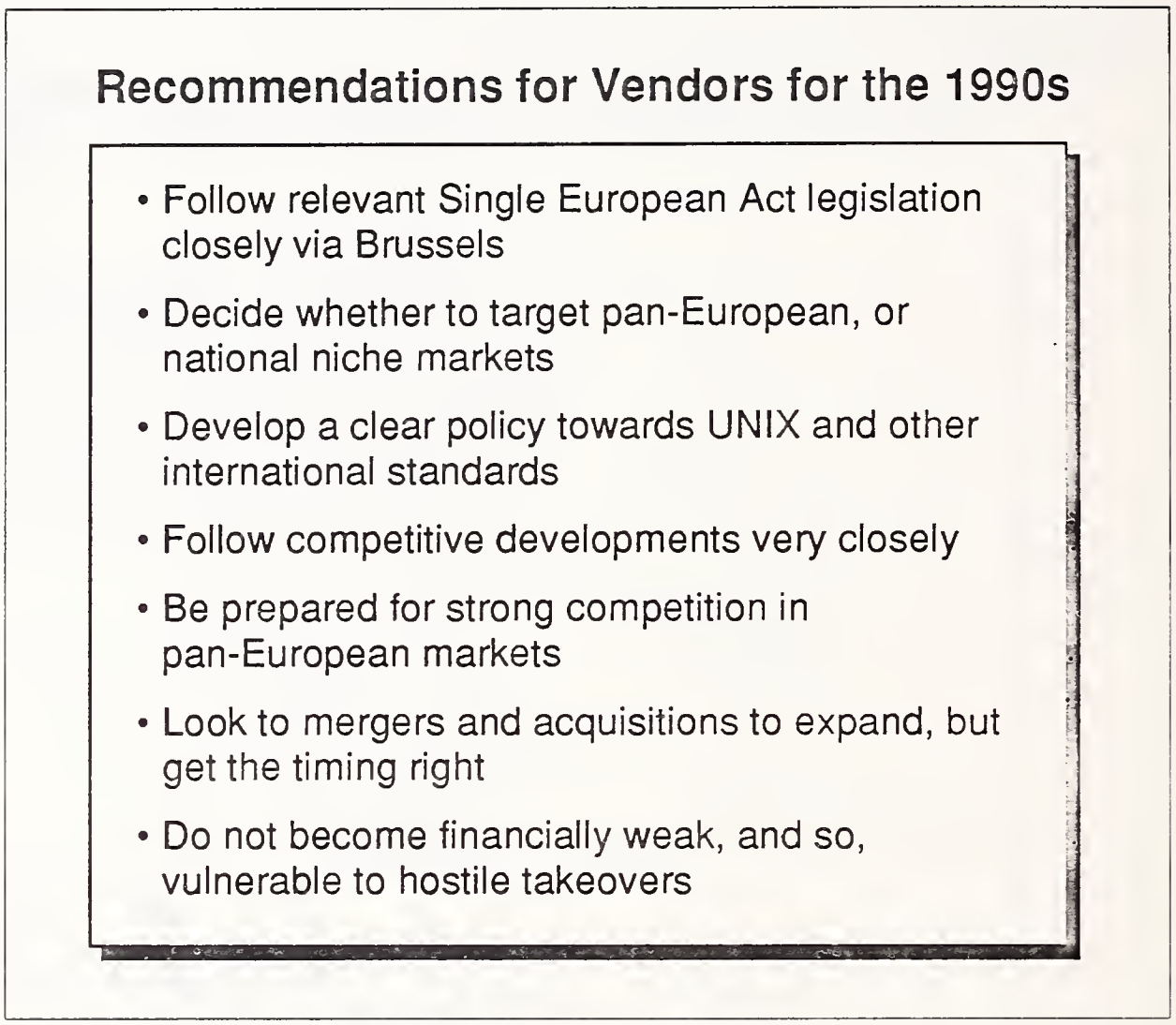
EXHIBIT II-10



problems, and are not giving developments in Brussels sufficient attention.

The European Commission has already given substantial stimulus to the development and implementation of open standards in Europe. The move to UNIX is now driven by the Europeans, not the U.S. The European Commission strongly supports OSI and is leading the way in developing international standards; for example, the EDIFACT protocols for EDI.

Wider European markets give vendors opportunities, but also pose threats. There will be many acquisitions and mergers in the EEC software and services industry over the next few years. Vendors are warned not to become financially weak because they have become too optimistic about the opportunities and resources.

The possibility of some vendors misjudging market developments and leaving themselves open to being taken over gives other vendors acquisition opportunities. Both the larger European and U.S. vendors are watching these opportunities and will be able to acquire other vendors at a good price if they have the correct timing.

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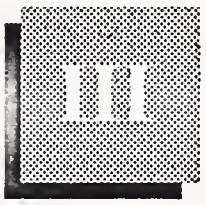
Background to the Single European Act



Background to the Single European Act

The purpose of this chapter is to provide a historical context for the Single European Act. The Single European Act, popularly referred to as "1992" because of the December 31, 1992 deadline for implementation, has come about as a result of the general historical trend towards unity in Western Europe, and the previous failed attempts to bring about free trade. However, in order to understand the nature of the Single European Act and the European Commission's 1992 initiative, it is important to understand this historical background and the recent European competitive environment in a little more detail.

A Historical Background

The original motivation behind the formation of the EEC was political. The rise of nationalism in the eighteenth and nineteenth centuries culminated in the twentieth century with two world wars which resulted in loss of life and destruction on an unprecedented scale. The cost of these wars greatly contributed to the weakening of Europe in economic terms relative to the United States.

After the conclusion of the second world war, there were many in France and elsewhere who were fearful of a revival of a strong Germany. They would have liked to see a repeat of the policies carried out after the first world war by Clemenceau at the Treaty of Versailles, where an attempt was made to keep West Germany economically weak. However, a more constructive approach was forged by Robert Schuman, then foreign minister of France, who was influenced by the ideas of Jean Monnet, another Frenchman. Monnet believed that a more effective solution to the "German problem" was to link West Germany economically to its neighbours so inextricably that another war would clearly not be in anyone's interest.

The threat of the Soviet Union seemed greater than the threat of a defeated and divided Germany. This, combined with the absence of the British, and the fact that the two most vociferous exponents of the idea

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were French, meant that the "Schuman plan" stood a considerable chance of success.

The plan was that the French and West German coal and steel industries should be united and placed under a higher authority. This was not only received enthusiastically by West Germany, but also by Italy and the Benelux countries (Belgium, the Netherlands and Luxembourg formed the Benelux customs union in 1948). Under the Treaty of Paris of 1951, the European Coal and Steel Community (ECSC) was formed in 1952, with Jean Monnet as the first president. The British, who had proposed a union with France in 1940 as a measure against West Germany, had not yet come to terms with the realities of the postwar world, and remained apart.

The failure of a parallel attempt to create a European defence force convinced Monnet that economic cooperation was the most fruitful way towards unity. Declining a second term as president of the ECSC, he formed a high-level pressure group consisting of influential people from the six countries in the ECSC. The eventual result was a detailed report on a common market commissioned by the foreign ministers. This formed the basis of the Treaty of Rome.

The Treaty of Rome was signed on March 25, 1957, along with the agreement to set up the European Atomic Energy Community (Euratom). The European Economic Community came into being on January 1, 1958, and Jean Monnet has since been recognized as the founder of a united Europe.

Great Britain was not invited to become part of the EEC in 1957, and it is highly unlikely that it would have accepted anyway. It was still coming to terms with the loss of its empire. It had created the British Commonwealth as a framework for the development of those countries which were formerly part of the British Empire. It was also still pursuing its "special relationship" with the United States. Great Britain was therefore facing in the wrong direction.

The rise of De Gaulle in France was ostensibly a threat to the EEC since he and his followers had opposed it. However, he recognized it as an opportunity to extend French influence, and developed an extremely close relationship with Konrad Adenauer, the West German president. This closeness between France and West Germany has remained the backbone of the EEC ever since.

The success of the EEC caused some concern amongst close neighbours who were worried about being excluded. A British initiative resulted in the formation of the European Free Trade Association (EFTA) in 1960, a looser collection of trading states on the periphery of the EEC — Norway, Sweden, Switzerland, Denmark, Austria and Portugal. Almost

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immediately, the British realised that the EFTA consisted of relatively small markets, and applied for full membership in the EEC in 1961, closely followed by Ireland, Denmark and Norway.

The Nassau agreement between the U.K. and the United States, major EEC problems over negotiations on agriculture with the U.K., and the hostility of many sectors of British opinion towards the EEC convinced de Gaulle that Britain was not fully supportive of the concept of the EEC. In 1963, he announced that France doubted the political will of Britain to join the EEC.

Not long afterwards, all negotiations with the United Kingdom were terminated, and the other three applicant countries withdrew as well. France's community partners had no choice but to accept the situation, and France and West Germany signed a treaty of friendship and cooperation. Three years later, another attempt by the British to join was rejected by de Gaulle, and again his EEC partners acquiesced.

In 1965, proposals were made to make the EEC financially autonomous and to give wider powers to EEC institutions, in particular to the European Parliament. France's reaction to these proposals was extremely hostile, and for a period the French boycotted the EEC institutions. This "empty chair" policy was a direct result of the conflict between Nationalists and Europeans.

Although the postwar origins of a united Europe had been political, the Treaty of Rome made no reference at all to political cooperation and was concerned solely with economics and trade. Each member of the EEC feared the domination of others. The smaller countries feared domination by the larger ones, and the larger ones feared domination by European institutions, such as the Commission in Brussels. In 1966, following the "Luxembourg Compromise" whereby member states were given the right of veto when their "very important interests" were concerned, France again took a seat at the EEC institutions.

Following President de Gaulle's resignation in 1969, and his death the following year, negotiations with the United Kingdom were restarted. These were followed by negotiations with Ireland and Denmark, and a little later with Norway. The United Kingdom, Ireland and Denmark signed the Treaty of Accession in 1972, but in Norway the proposal was rejected in a referendum by a narrow majority, so that the EEC, previously referred to as "the six," became "the nine."

It was hoped that the impetus of new members would speed up the development of the EEC, but these hopes were not realised. Large sections of the British and Danish population remained hostile, restricting political initiatives, and the "nine" was a less coherent group than the "six" had been. There were problems with the agricultural policy which,

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in addition to creating large surpluses, was very expensive and created an imbalance in contributions from the British.

There was little progress during the 1970s. The oil crisis in the early seventies did much to turn the economic attention of member states towards domestic survival. There was an agreement that the heads of government would meet more regularly and the European Monetary System (EMS) would be developed. There were relatively trouble free negotiations with Greece, which joined the EEC in 1979, and the establishment of a regional fund to help undeveloped parts of Europe.

The stagnation of the seventies gave way to a crisis at the beginning of the eighties. The key factors are summarised in Exhibit III-1:

- Spain and Portugal, which had returned to democratic systems of government in the seventies, had applied to join. The Spanish in particular presented a threat to farmers in the neighbouring EEC countries, and there was a real risk that France would again veto an application.

- The cost of the Common Agricultural Policy (CAP) was absorbing more and more of the EEC budget and was threatening the EEC with bankruptcy.

- British payments to the EEC budget were disproportionately high, since the U.K. was a large importer of food. The new conservative government under Margaret Thatcher was very aggressive in seeking a solution to this problem.

- Despite the intentions of the Treaty of Rome, many petty regulations survived which restricted free trade.

- The EEC institutions were perceived as slow, bureaucratic and cumbersome.

- Technologically, Europe was fast falling behind the United States and Japan, and attempts by member states to support national champions had failed.

The crisis was eventually resolved in 1984, principally because President Mitterand was determined to resolve it. He accepted that it was necessary to rise above purely national interests for the sake of the general good of the EEC.

The solutions were not achieved overnight, but the log-jam was eventually cleared by resolving first, at the insistence of the British Prime Minister, the problem of British budget contributions. The British agreed to increase the funding of the EEC budget, and it was also agreed that the proportion of the budget spent on agriculture would be progressively

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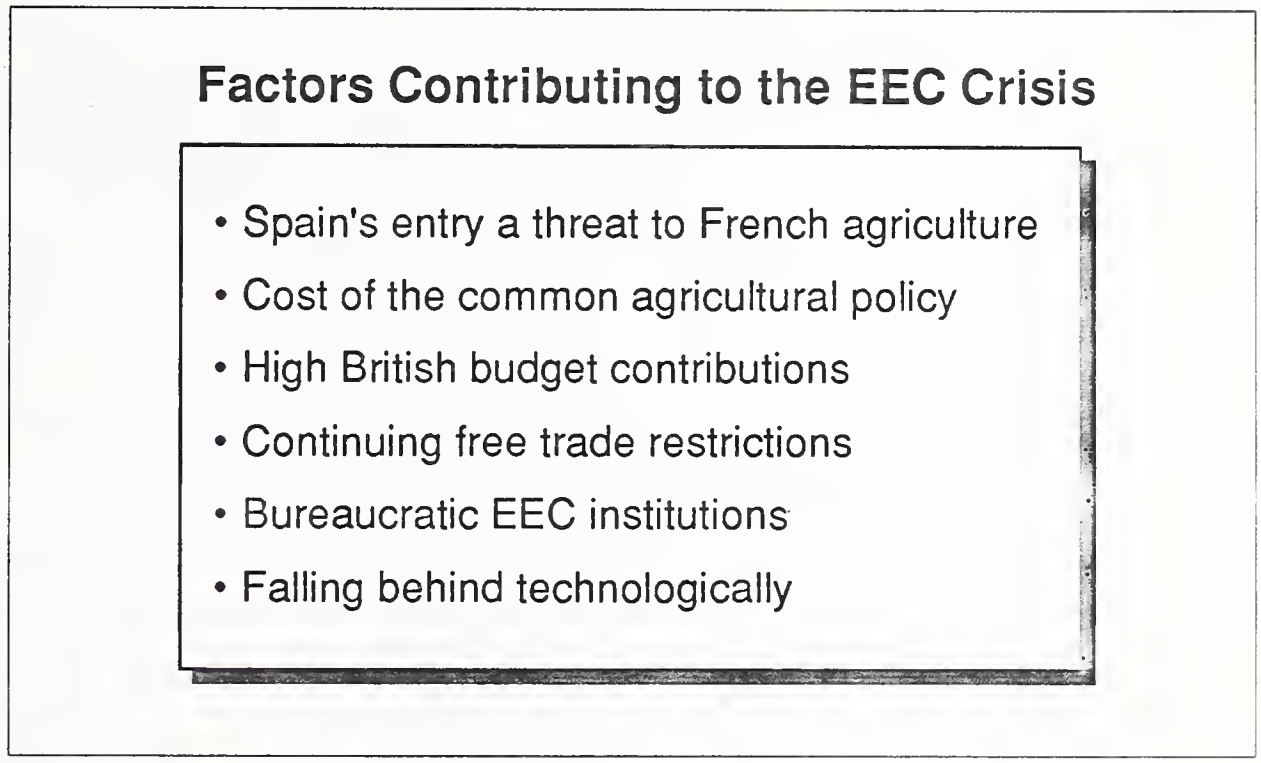
EXHIBIT III-1



reduced. Despite last-minute objections from Greece, Spain and Portugal were accepted into the EEC in 1986. Joint European research programs were instituted, some of which included non-EEC European states.

Perhaps the most significant of all the solutions was a commitment to address the failure to create a truly free market. A seven-year timetable was agreed upon for the removal of 300 restrictive barriers. This commitment to the creation of the internal market by December 31, 1992 was adopted in December 1985. It became known officially as the Single European Act, and is popularly referred to as "1992."

B

EEC Structure

1. The Member States

The twelve members of the EEC are comprised of Belgium, the Netherlands, and Luxembourg, which formed the original Benelux customs union in 1948; Italy, West Germany and France, which were founder members with the Benelux countries in 1957; the United Kingdom, Ireland and Denmark, which joined in 1972; Greece, which joined in 1979; and Spain and Portugal, which joined in 1986. They are listed, with their populations, in Exhibit III-2.

2. The European Commission

The Commission, which has its headquarters split between Brussels and Luxembourg, is assigned a wide range of duties. These can broadly be defined as being the guardian of the Treaties, the executive of the

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EXHIBIT III-2

EEC Member States and Populations

Country	Population (Millions)
Belgium	10.0
Denmark	5.0
France	56.0
Germany	61.5
Greece	10.0
Netherlands	15.0
Ireland	3.5
Italy	57.0
Luxembourg	0.5
Portugal	10.5
Spain	39.0
United Kingdom	57.0
Total	325.0

Communities, the initiator of EEC policy and the representative of EEC interest in the Council.

The Commission has 17 members, chosen by agreement of member state governments: two each from France, West Germany, Italy, Spain and the United Kingdom; and one each from Belgium, Denmark, Greece, Ireland, Luxembourg, the Netherlands and Portugal. Each Commissioner is appointed for four years, and is in charge of an area of EEC policy. The Commission is currently divided into 22 Directorates General (DGs) and a number of specialised and associated services, as listed in Exhibit III-3. The Commission employs some 11,000 officials, of which roughly a quarter are occupied in linguistic work covering the nine working languages of the EEC. The number of officials is rather modest for the job in hand, being less than that of some single ministries in some of the member states.

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EXHIBIT III-3

EEC Directorates General

DG I	External Relations
DG II	Economic & Financial Affairs
DG III	Internal Market & Industrial Affairs - Task Force for Small & Medium-Sized Enterprises
DG IV	Competition
DG V	Employment, Social Affairs & Education
DG VI	Agriculture
DG VII	Transport
DG VIII	Development
DG IX	Personnel & Administration
DG X	Information, Communication & Culture
DG XI	Environment, Consumer Protection and Nuclear Safety
DG XII	Science, Research & Development —Joint Research Centre
DG XIII	Telecommunications, Information Industries & Innovation
DG XIV	Fisheries
DG XV	Financial Institutions & Company Law
DG XVI	Regional Policy
DG XVII	Energy
DG XVIII	Credit & Investments
DG XIX	Budgets
DG XX	Financial Control
DG XXI	Customs Union & Indirect Taxation
DG XXII	Coordination of Structural Instruments

The tasks of the Commission are to ensure that EEC rules and the principles of the Common Market are respected. As the guardian of the Treaties, the Commission sees that their provisions, as well as the

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decisions of EEC institutions, are correctly applied. It decides on requests from member states wishing to avail themselves of the safeguard clauses in the Treaties which allow, in exceptional cases, temporary waivers or derogations from EEC rules.

The Commission has investigative powers and can impose fines on individuals or companies, notably those which are found to be in breach of EEC competition rules. Appeal is allowed in the European Court of Justice. States that fail to respect their obligations can also be taken before this court by the Commission. It proposes measures to the Council of Ministers which are likely to advance the development of EEC policies; for example in the areas of agriculture, energy, industry, research, the environment, social and regional problems, external trade, economic and monetary union. In addition, it implements EEC policies, whether based on Council decisions or on Treaty provisions.

Under the Single European Act, the Commission is given the power to implement the rules which the Council lays down, in all but exceptional cases. Some of these executive powers can be subject to procedures for collaboration and consultation with national experts.

3. The Council of Ministers

The Council of Ministers consists of ministers from member state governments and makes the major policy decisions of the EEC. A minister from each government acts as President of the Council for six months in rotation.

Participants in meetings change in accordance with the agenda; for example, industry ministers meet to discuss industrial policy, and the foreign ministers coordinate the more specialised work of their colleagues. The Council of Ministers is assisted by The Committee of Permanent Representatives ("Coreper"), which coordinates the groundwork for EEC decisions undertaken by numerous meetings of senior officials of member states, and a general secretariat of about 1,900.

The Council of Ministers is entitled to deal only with proposals from the Commission, and can only alter them by unanimous agreement. Unanimity is also required for certain important decisions, but the procedure has often been slowed down by being sought when not strictly necessary. The Commission has always urged more frequent use of the qualified majority vote laid down in the Treaties.

Out of a total of 76 votes, 54 are needed to approve a Commission proposal. Individual member states have numbers of votes as follows: France, West Germany, Italy and the United Kingdom—10 votes each; Spain 8—votes; Belgium, Greece, the Netherlands and Portugal—5 votes each; Denmark and Ireland—3 votes each; and Luxembourg—2 votes.

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In order to strengthen the EEC decision-making process, the Single European Act amending the Treaties provides for majority voting to be extended to certain decisions, particularly in relation to completion of the Internal Market, research and technology, regional policy and improvement of the working environment.

4. The European Council

The Treaty of Rome makes no special provision for the meetings of the heads of government of member states, and during the early period they met only infrequently. However, it became apparent that a more frequent exchange of views was necessary, in order to give a sense of strategic direction to the EEC and to resolve problems which the Commission and the Council of Ministers could not resolve through the normal processes.

From 1975, three meetings were held each year, subsequently reduced to two. In formal terms, these meetings have the same status as meetings of the Council of Ministers, and are recognized legally in the Single European Act. The powers of the European Council, however, are not defined.

The European Council has to a certain extent replaced the Commission as the motivator of the EEC, since it is the heads of government who have the political authority not only to impose unwelcome decisions, but to reconcile them with political forces and pressure groups in their home countries.

5. The European Parliament

The European Parliament was originally made up out of co-opted members from national parliaments. Since 1979, when direct elections were first held, members have been elected by universal suffrage (except temporarily in the cases of Spain and Portugal).

The Parliament has 518 MEPs, or Members of the European Parliament. The breakdown by member state is illustrated in Exhibit III-4. Members are elected every five years, and form political rather than national groups. The political composition of the European Parliament in 1984, and the impact of the 1989 elections, is shown in Exhibit III-5.

The Parliament has a staff of 3,000 officials based in Luxembourg. It has 18 committees, and in committee and plenary sessions it discusses and gives opinions on major EEC problems.

In spite of repeated demands, the European Parliament does not have legislative powers like those of national parliaments. Under the present EEC legislative process, the Commission has the sole power of initiative, and the Council plays the major role in taking decisions. Nevertheless, the Parliament does have some powers.

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EXHIBIT III-4

Analysis of MEPs by Member State

Country	Number
France	81
West Germany	81
U.K.	81
Italy	81
Spain	60
Netherlands	25
Belgium	24
Greece	24
Portugal	24
Denmark	16
Ireland	15
Luxembourg	6
Total	518

It has the power to dismiss the Commission by a two-thirds majority. It supervises the Commission and Council, partly through debating their programmes and reports, and partly through written and oral questions. It is invited to give an opinion on Commission proposals before the Council can make a decision on the text, possibly revised by the Commission. It has budgetary powers which allow it to take part in major decisions on EEC expenditure.

It is the Parliament which finally adopts or rejects the draft budget drawn up by the Commission and agreed on by the Council. It has the power to give a discharge to the Commission for its management of the budget, that is, the Parliament verifies that the EEC budget, once adopted, is properly executed. Over the years, it has established agreement procedures with the Council and the Commission to discuss budgetary matters and proposals which have major financial implications. The various institutions are thus able to learn each other's views and attempt to

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EXHIBIT III-5

Political Composition of European Parliament by Number of MEPs, 1984 and 1989

Political Grouping	1984	1989
Socialists	172	180
Christian Democrats in the European People's Party	119	121
European Democrats	63	34
Communists and allies	46	42
Liberal & Democratic Reformists	41	49
Renewal & Democratic Alliance	34	20
Rainbow Group	20	13
European Right	16	17
No affiliation	7	12
Greens	-	30
Total	518	518

narrow differences before adopting final positions.

6. The Court of Justice

The Community Court of Justice, sitting in Luxembourg, is comprised of 13 judges, assisted by 6 advocates-general.

Both groups are appointed for six years by mutual consent of member states. The Court's role is to quash, at the request of an EEC institution, governmental or individual, any measures adopted by the Commission, Council of Ministers or national governments which are incompatible with the Treaties. It also passes judgement, at the request of a national court, on the interpretation or validity of points of EEC law.

If a legal action results in a disputed point of this kind, a national court can request a preliminary ruling by the European Court. It must do so if there is no higher court of appeal in the member state concerned.

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7. The Court of Auditors

The Court of Auditors, set up in 1977, replacing an earlier Audit Board, has the task of examining all accounts of revenue and expenditure of EEC institutions and of any other bodies set up by the EEC, to ensure that all revenue has been received and all expenditure made in a legal manner. It also has the function of ensuring that financial management has been sound.

8. The Economic and Social Committee

The Economic and Social Committee is a representative and professional body that the Commission and the Council of Ministers are obliged to consult on a wide range of issues. The Treaty of Rome specifies a number of topics where consultation is mandatory before directives and regulations may be approved, but the Committee is consulted on many other issues as well. In practice, the Committee is able to offer opinions on almost any matter it wishes to.

Membership of the Committee is divided into three interest groups: Group I represents employers, Group II represents workers, and Group III represents various interests such as consumers, farmers, the self-employed, academics, etc.

The members are appointed by the Council of Ministers on the nomination of governments, which normally consult with the interest groups most concerned, such as trades unions and employers' organisations, before members are nominated. The current membership is 189, consisting of 24 each from France, West Germany, Italy and the United Kingdom, 21 from Spain, 12 each from Belgium, Greece, the Netherlands and Portugal, 9 each from Denmark and Ireland, and 6 from Luxembourg. Appointment is for a renewable term of four years, the current term of office ending in 1990. Committee members generally work part-time, and other occupations.

The headquarters of the Committee is in Brussels, and meetings are held every month. Detailed work is undertaken by nine specialist sections dealing with agriculture, transport and communications, energy and nuclear matters, economic and financial matters, industry and commercial crafts and services, social matters, external relations, regional development and protection of the environment, public health and consumer affairs.

The Committee is seldom influential on controversial political matters, but is more so on technical issues where the expertise of its members can often be made use of.

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9. Legislative Procedures

Decisions made by the Council of Ministers, and by the Commission where it has decision-making powers, are enforced by measures which change or influence the laws in member states. There are four ways available, as follows:

- Regulations, which apply directly
- Directives, which lay down compulsory objectives, but leave it to member states to translate them into national legislation. These are initiated by the Commission and adopted by the Council of Ministers, in most cases after having received an opinion from the European Parliament and, where appropriate, the Economic and Social Committee
- Decisions, which are binding only to the member states, companies or individuals to whom they are addressed
- Recommendations and opinions, which are not binding (except in the European Coal & Steel Community, where they are equivalent to directives)

In addition, national laws are affected by case law resulting from decisions taken by the Court of Justice, whose role is to interpret the Treaties affecting the EEC and to adjudicate disputes between the other institutions, or between any of them and one or more member states.

C

The European Competitive Environment

1. Trade Barriers

Despite the original political reasons for creating a united Europe, the Treaty of Rome was only concerned with the economics of a common market, and above all tariff barriers to trade.

The Community of 12 member states constitutes a market population of over 320 million people, very nearly as large as that of the United States and Japan combined. However, the region is still divided by barriers which split Western Europe into small, protected markets.

Many barriers have nothing to do with tariffs, for example border controls, customs formalities, divergent standards and technical regulations, and conflicting business laws, all of which are created by the laws of the individual countries and can only be modified or removed by legal processes. The theory or motivation is that removal of these barriers can make the EEC a single economic area, promoting technical progress, achieving economies of scale, and creating a more efficient use of resources in agriculture and in the manufacturing and service industries. In

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general, the move is to "harmonise" laws and regulations so that they are the same in all member states of the EEC.

There are, in addition, other "non-tariff" barriers, such as protectionist procurement policies, which in many cases are encouraged by member states' governments in order to protect national industries. There is still a temptation for some countries to support and protect their national champions, even though evidence suggests that this makes them less able to compete in foreign markets.

The creation of a truly Common Market should not only be of advantage to those trading from within Europe, but should also create market opportunities for other countries, such as the United States and Japan. But this has raised the concern that national champions will be replaced by European champions, to the detriment of countries outside the EEC.

The twelve member states of the European Economic Community have favourable tariff trading arrangements and high levels of trade with each other, but in most industries, they are separate and independent markets. The populations of the member states and their gross national products, as compared with equivalent figures for the United States and Japan, are shown in Exhibit III-6. It can readily be seen from these figures that the economic presence and potential of the EEC is very significant in world terms.

Compared to Europe, the United States has a relatively free market economy across the whole of its territory. As a result, most products and services can be marketed freely from one state to another and although perhaps different, the prices of products are similar, in whichever state they are purchased. Companies in many market sectors, including computer systems and software, regard the whole of the United States as their market, and look to that market as a source of revenue and of funding for research and development. They also have regard to the quantity of products required to satisfy that market, in their investment in product design and production engineering.

In Europe the pattern is different. Companies tend to operate in their own national markets; then, when they reach a significant market share nationally, they either diversify or approach one of the other country markets. Companies that move across national boundaries can find that the costs are high and that the barriers of language, national culture and procedure create difficulties. This will depend to some extent upon which boundaries are being crossed and in which direction. The nature of the product or service and the industry will determine the ease of access, which can vary from easy to impossible.

Clearly, in the case where the barriers to cross-border marketing are considered high, the amortisation of development and fixed costs is less

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EXHIBIT III-6

Developed Economy Population and Gross Domestic Product, 1988

Country	Population (Millions)	GDP/capita ($ Millions)
Belgium	10.0	15.1
Denmark	5.0	21.2
France	56.0	16.9
Germany	61.5	19.6
Greece	10.0	5.3
Netherlands	15.0	15.4
Ireland	3.5	8.9
Italy	57.0	14.4
Luxembourg	0.5	18.9
Portugal	10.5	4.1
Spain	39.0	8.7
United Kingdom	57.0	14.3
Europe (12)	325.0	14.6
U.S.	246.0	19.5
EFTA	32.0	21.6
Japan	122.5	23.2

Source: OECD

favourable. The net result, in many industries, is that the only true pan-European companies are often non-European. This is the case in the market for computers.

U.S. companies are able to operate from the base of a large domestic market, and Japanese companies have been nurtured by government until they are strong enough to compete effectively in international markets. While U.S. and Japanese companies also experience the difficulties of trading in the fragmented European market, their scale of operations are

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such as to allow them to compete more effectively than European companies from other member states, which operate from a smaller and less pan-European base.

As summarised in Exhibit III-7, there are a considerable number of barriers to a unified market: legal barriers, business practise barriers, governmental barriers, and cultural barriers. There are different legal requirements in each country to cover establishment, trading, accounting, employment, consumer protection, advertising, and copyright. Not only are there different legal requirements for accounts, but there are also different accounting conventions.

EXHIBIT III-7

Every state tries to maximise the tax liability within its own boundaries, and national government controls and subsidies favour national companies. As well as the border controls and the export licenses that result from the commitment to Coordinating Committee on Multilateral Export Controls (COCOM), there are different languages and cultures. These

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barriers are by no means unique to Europe, but taken together they provide a significant hindrance to the establishment of free trade.

2. Additional Costs

In addition, there are transport costs that make trading in Europe more expensive. For example, air fares are higher as a result of protection of national airlines by governments. Similarly, in order to protect their own interests, member governments will adopt other protectionist measures, such as direct costs in the form of special levies, or in the form of regulations, along with all the necessary paperwork. The latter is not a direct cost, but incurs more costs, in ensuring compliance to those regulations, and in delays. These special interests could be, for example, to protect a state railway system, or perhaps a heavy motorised transport industry.

Computer equipment is a typical example of standard international goods being sold more expensively in Europe than in the United States. Not only are equipment prices higher in Europe, but they vary significantly between one European country and another by as much as 50 percent. In some cases, these price differentials are backed up by customs controls, so that importation of cheaper equipment from another European country with cheaper prices is illegal.

Other regulations that require compliance are those of performance and compatibility standards. Different national standards organisations such as DIN (Germany), BSI (United Kingdom), and AFNOR (France) produce standards based on good equipment practice. They often assume a quasi-legal status because of their use as a reference in technical regulations and thereby in insurance and product liability claims. They are also of major importance in procurement contracts, in particular those issued by the public sector.

In many fields, national standards have been developed independently, and range from being in direct conflict (for example, electrical plugs and sockets) to having different priorities. Thus, while equipment may readily be designed to conform with the standards in one particular country, to design it so as to meet the standards in all relevant countries is more expensive.

The procedures for conformance testing and certification often involve the study and completion of voluminous documents in a foreign language, extensive charges, and time delays of up to one year. In many cases, these are an effective deterrent to exporters, and have been known to be used by the authorities in some member states to discourage competition. The insistence on backward compatibility of new equipment by dominant purchasers in the telecommunications and public sector procurement has been effective in keeping out new entrants to the market.

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Telecommunications services in European countries have traditionally been monopolies, usually government-owned. The result has been that tariffs are artificial, and not cost-related. For example, long distance services are higher for international calls than for a similar distance in a single country. This penalises international trading.

National companies have provided equipment to national telecommunications monopolies. Apart from a lack of competitive efficiency, this has resulted in equipment that is incompatible from one European country to another. For example, in videotex systems, West Germany, France and the United Kingdom developed their systems on different standards (CEPT, Antiope and Prestel), and only now are attempts being made to bring them together. Progress has been made in hardware compatibility, and effort is now being put into systems and software compatibility, in particular in the area of Open Systems Interconnection. Similarly, in network services each national PTT has developed its own standard of X.25, and in order to link them together, another protocol (X.75) has had to be agreed upon and implemented.

Financial services have also been constrained from operating in a homogeneous market. The cost of financial services varies widely across the EEC, in some cases by as much as 50 to 100 percent. For example, commercial loans are most expensive in the United Kingdom and Netherlands; letters of credit and exchange drafts in Spain; consumer credit in West Germany; life, home, fire and theft insurance in Italy; and public liability insurance in France.

Movements of capital have traditionally been carefully controlled by governments. In recent years, these constraints have substantially been removed in West Germany, the United Kingdom, Benelux and Denmark, where capital movements are free of controls except for reporting and authorisation procedures on certain transactions. France and Italy are now in the process of liberalising controls, though strict controls, though still applied in Spain, Portugal, Greece and Ireland.

In spite of progress in the establishment of branch banks in other EEC countries, the costs which have to be carried by foreign banks may be considerably in excess of those borne by existing domestic banking networks. In Spain and Italy restrictions are placed on foreign investment or participation in local banks. In some countries, the soliciting of banking services across borders is prohibited. Some member states prohibit insurers from seeking business unless they have a local permanent establishment.

3. Public Procurement

Procurement by the public sector in the EEC amounts to over $550 billion (ECU 500 billion) per year, or around 15% of the EEC's gross

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domestic product. It has traditionally been used by member states' governments as a tool with which to pursue national policies, develop local industries and provide employment. They have used their powers to support employment in declining industries, to foster emerging industries, such as defence and high technology, and in some cases to indulge in what Americans would call "pork barrel" politics.

These preferential procurement policies have often been natural and well-meaning attempts to counter Japanese and United States competition, and are certainly not unknown in those countries. However, the net result has been to make Europe less agile and less capable of coping with some of the important issues that have had to be faced. The move from products to services, and the decline of heavy industry, have been very painful processes for many EEC members.

One example is the telecommunications industry in Europe, in which five major suppliers have each developed their own switching systems, aided by national research and development funding and protected by restrictive public procurement. As a result, the price per line is between two and five times the cost of what it is in the United States.

The European telecommunications companies are extremely ill-equipped to compete in international markets. As a result, U.S. and Japanese companies have secured a dominant position in these markets. The cross-border sales of data processing systems within the EEC have been little better. For pan-European network services, competition has tended to come from U.S. companies, rather than from companies from other member states.

The Commission firstly tackled this problem by issuing EEC directives in 1971 relating to public works, and in 1977 relating to public supplies. However, these directives provide for certain exemptions when single tender action may be undertaken, namely:

- If no tenders are received or those received do not satisfy the specification
- When protection of exclusive rights limits the supply to a single manufacturer
- When the articles are manufactured purely for the purposes of research, study or development
- When reasons of unforeseeable urgency dictate utmost speed
- When deliveries from an original supplier are replacements or extensions, and a change of supplier would cause compatibility problems

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- When supplies are declared secret or their delivery must be subject to special security measures

In addition, the supplies directive only applies to contracts in excess of $154,000 (ECU 140,000), and the splitting of contracts in order to bring individual purchases below this figure is forbidden. Contracting authorities intending to offer a public supply contract must make their intention known by means of a notice in the Official Journal of the EEC, stating whether open or restrictive practices are to be used.

EEC legislation on procurement has always excluded from its scope sectors characterised by national procurement for strategic reasons. Until January 1, 1981, the public procurement of data processing systems was excluded from these rules, and most member states exercised preferential procurement policies in purchasing computer systems.

The termination of these provisions brought about the formation of a number of national associations representing industrial interests, whose mission was to lobby governments into using the exemption provisions to the maximum in favour of domestic industry. However, four major sectors continued to be excluded: energy, transport, telecommunications, and water supply.

Legislation is beginning to have some effect, but there are still some problems, and some countries are more open than others. Purchasing authorities are able to evade the spirit of the legislation by the use of non-tariff methods of creating barriers to trade, such as by prolonging the requirement for conformance with standards previously used.

Purchasing is in many cases significantly decentralised and difficult to control, and compliance with the 42 days statutory notice between dispatch of the notice and the closing date for tenders (thereby effectively giving around 30 days' notice from the date of its appearance in the Journal) gives little time for a company, which first becomes aware of a tender through the Journal, to present any tender.

4. Results of Fragmentation

As a result of the fragmentation of the European market, European companies operate with production volumes which are less economic, revenue is insufficient to fund an adequate investment in research and development and production engineering, and the costs of increasing the market base discourages international trading. This applies particularly to small and medium-sized manufacturing companies.

The costs of restrictive practices in a closed Europe have been assessed by the European Commission by evaluating the potential gains available

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to the EEC through completion of the Internal Market. The estimated gains are shown in Exhibit III-8, and are well in excess of $2 billion.

EXHIBIT III-8

Estimated EEC Gains from Removal of Restrictive Practices

Estimated Gains	$ Billions	ECU Billions
Gains from the removal of barriers affecting trade	9-10	8-9
Gains from the removal of barriers affecting overall production	63-78	57-71
Gains from exploiting economies of scale more fully	67	61
Gains from intensified competition, reducing business inefficiencies, and the removal of monopolies	51	46
Total (12 member states' 1988 prices) (not cumulative)	191-284	174-258
Midpoint of above	238	216

Source: Study by European Commission Directorate General for Economic and Financial Affairs.

D

The Single European Act

The basic principles of the removal of barriers in order to complete the Internal Market were set out in the Treaty of Rome. As has been made clear, specific measures, rather than principles, were needed in order make it a reality.

It was the European Parliament, and in particular the Kangaroo Group (formed by the late Basil de Ferranti, with Karl von Wogau, Dieter Rogalla and other members of the European Parliament from a host of member states), which kept attention on the objective of the Common Market; the Kangaroo symbolised the jumping of barriers. In each edition

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of its journal, "The Kangaroo News," are published "cases of bureaucratic or petty or sometimes more malevolent disregard of the fundamental principles of the Treaty" in order to keep infringements well in the public eye.

The Kangaroo Group is supported by MEPs, members of the Economic & Social Committee, prime ministers, and senior ministers from most member states, as well as by a large number of chambers of commerce, trade associations and private persons throughout the EEC.

One of the most famous examples concerns the "Cassis de Dijon" ruling, in which a German company was prevented from importing a popular French drink because it did not comply with West Germany's exacting standards for the alcohol content of liqueurs. The Court of Justice ruled that unless the German government could prove that the liquid was harmful to health, or contravened tax or consumer protection laws, the importation could not be prevented.

Following the rulings of the Court of Justice on the "Cassis de Dijon" case in 1979, the principle that goods lawfully manufactured and marketed in one member state must be allowed free entry into other member states, has become a cornerstone of EEC policy. In cases where harmonisation of regulations and standards is not considered essential from either a health/safety or an industrial point of view, immediate and full recognition of differing quality standards must be the rule. In particular, sales bans cannot be based solely on the argument that an imported product has been manufactured in accordance with specifications which differ from those used in the importing country.

The EEC required a fresh impetus, which was given in 1985 by the president of the European Commission, Jacques Delors, a former French finance minister, who toured the member states in order to sound out various ideas for taking further steps towards a unified Europe. It then became the task of the newly-appointed commissioner for the Internal Market, Lord Cockfield from the United Kingdom, to identify specific measures.

A report was commissioned from Paolo Cecchini, and a list of 300 measures necessary to create a single market was constructed. This list was published in the White Paper from the Commission to the European Council, entitled "Completing the Internal Market" in June 1985, and became known as the "Cockfield White Paper." One of the most significant aspects of the White Paper was the setting of the deadline of January 1, 1993. This created a stimulus in the same way that President Kennedy's commitment to a deadline stimulated the U.S. space programme.

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In February 1986, the Single European Act, based on the Cockfield White Paper, was signed by heads of state. This act commits member states to the aim of progressively establishing a single market over the period ending December 31, 1992. The Single European Act also incorporates a series of important Treaty of Rome reforms to speed up decision-making by extending majority voting to some of the major areas of the single market programme. In the past, progress was often held up by the unanimous voting requirements which applied before the Single European Act came into force.

The main points of the Single European Act are to:

1. Establish the Internal Market, with a deadline of December 31, 1992
2. Make practical steps to reduce the constraints on small and medium-sized businesses
3. Progressively realise monetary union (not legally binding)
4. Reduce the disparities between rich and poor regions
5. Enable the European Parliament to amend legislation
6. Encourage technological research
7. Improve the environment
8. Cooperate in the sphere of foreign policy

The Act was originally a series of three hundred directives, later reduced to 279; analysed by topic in Exhibit III-9. As can be seen, many of the directives are very technical and detailed, and it is easier to see commercial impact of the act as defined in the Cockfield White Paper. The measures set out in the Cockfield White Paper are grouped into three parts: the removal of physical barriers, the removal of technical barriers, and the removal of fiscal barriers. The objectives of the act are summarised in Exhibit III-10.

There appeared to be a stunned silence after the signing of the act, as if the full implications had not been understood, and in Denmark and Ireland, it was referred to a referendum. Since then, however, a great deal of momentum has built up, and if nothing else, the "1992" initiative has been one of the most successful awareness campaigns of all time.

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EXHIBIT III-9

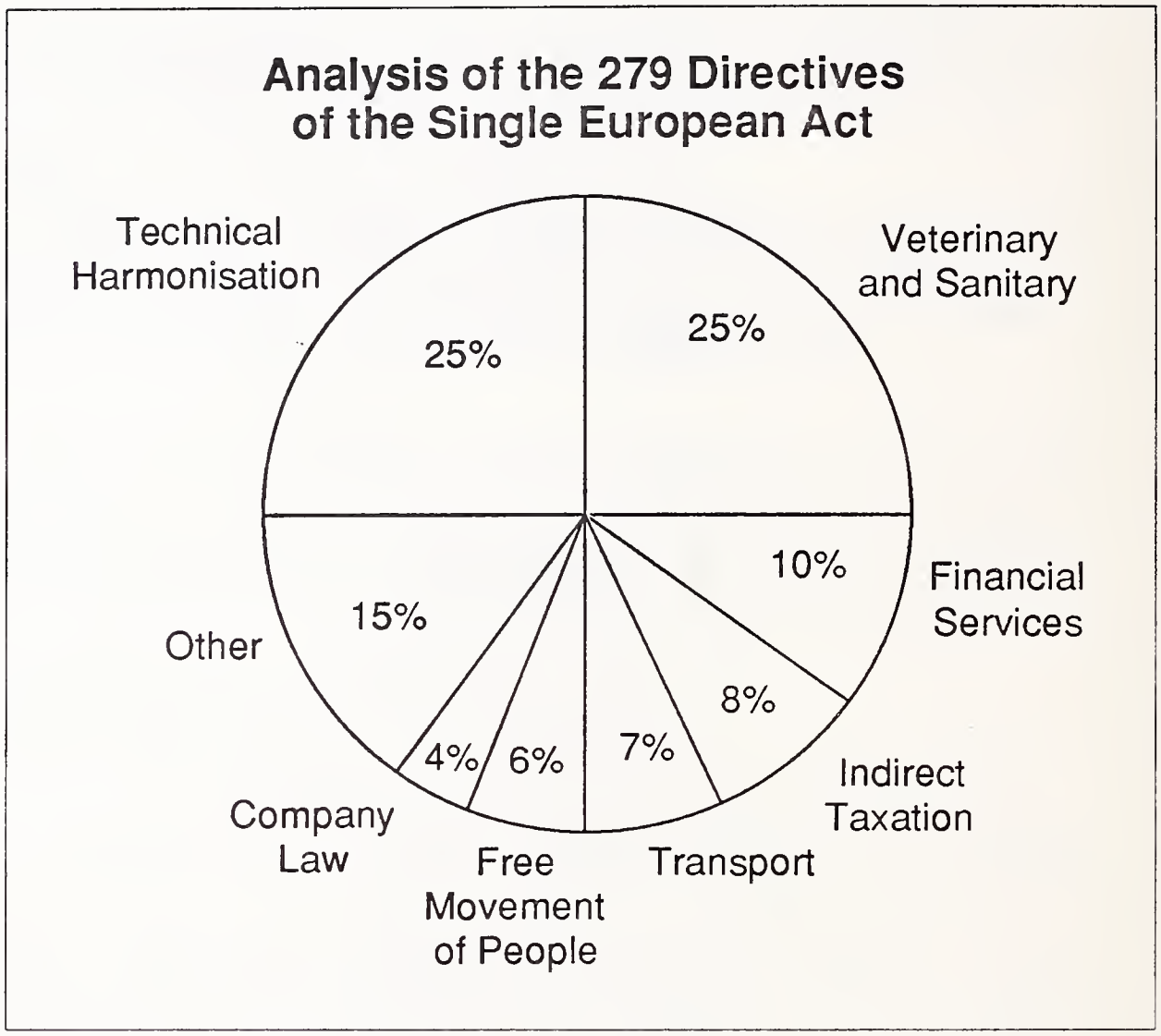

EXHIBIT III-10

Objectives of the Single European Act for Commerce

- Remove frontier controls
- Provide equal opportunity of access
- Recognise academic qualifications
- Provide free movement of labour
- Provide free availability of capital and financial services
- Provide free competition in transport
- Harmonise indirect taxes and excise duties
- Harmonise technical standards
- Liberalise telecommunications

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Impact on End-User Enterprises in Europe

IV

Impact on End-User Enterprises in Europe

The impact of the Single European Act and the work being carried out by the European Commission reaches into virtually every corner of the EEC and every niche market. This chapter reviews some of the most important implications for the computer software and services industry in the EEC, which directly affect it and which indirectly affect it through possible repercussions on the end-user enterprises that are its customers.

A The Business Environment

As discussed at the end of the last chapter, in order to assess the impact of the Single European Act, it is not sufficient to analyse the competitive environment. Many software and services vendors will be most affected by the impact on the revenue base. Some of the vendors contacted are clearly aware of this potential threat. If the client base is not able to compete successfully against companies of other EEC countries, the service companies in those countries stand to benefit. Therefore, this chapter is concerned with an analysis of the impact of the Single European Act on the client base.

1. Transportation of Equipment

Companies which handle goods as part of their business will benefit firstly from the reduction of costs of transportation brought about by the effects of 1992 on the transport industries, and secondly by the reduction in the administrative work which is required in the transportation of the goods across frontiers. Computer equipment is a relatively high-valued product and therefore the costs of transportation are less important than in the case of low-valued goods such as coal and steel. In the case of spare parts, the cost of transportation, though possibly not small in relation to the cost of the part, is again small compared with the cost of failure to the system for which the spare part is required. However, in the case of spares, it is the delivery time which is often of prime importance, and the ability of service engineers to carry parts and test equipment with them

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on a service trip without engaging customs formalities and the risk of hold-ups for statutory reasons.

Virtually all spares are moved around Europe by road. Currently they have to be cleared at each national border, with all the relevant export and import documentation. Even spares imported from outside the EEC have to have transit documentation presented in each country through which they move. After 1992, this will all change. Only one set of documents will need to be presented, once in the country of export, and once in the country of import, not for countries of transit. Goods imported into the EEC will be cleared in the first country of entry.

This new procedure will reduce the volume of internal EEC paperwork by nearly a factor of ten. In addition, for goods that are imported and exported within the EEC, the information requirements by the authorities of the countries involved will be reduced to basic trade statistics. The plan is for all such information to be made available directly from the shipper or freight forwarder electronically, using EDI and the EEC-inspired international standard, EDIFACT. This has turned out to be more complex and difficult than was initially expected, and will not be fully implemented until the mid to late 1990s.

As well as a substantial reduction in paperwork, the EEC trucking industry will have its old protective barriers reduced, if not eliminated, by the start of 1993. Traditionally, there have been many restrictive practices in the EEC, ranging from stopping non-domestic truckers from cross-trading (moving goods between countries that are not the same nationality as the trucking company), to high national trucking tariffs for domestic truckers, as in West Germany.

The European Commission proposal is for all EEC truckers to be able to move goods anywhere within the Community. If this happens, it will significantly reduce costs. In the first place, very competitive trucking nations such as the Netherlands will force prices down, and in the second place there will be fewer empty trucks. Due to the current restrictions, many trucks have to make their return journeys empty, and it is estimated that approximately forty percent of current movement is with empty trucks. Although some countries are attempting to delay this opening up of the road transport industry, the measure will very likely be in force by the mid-1990s.

2. Standards

The European Council Resolution of 1985 introduced the procedure under which the European Commission can issue a mandate to the Comité Européen de la Normalisation (CEN), or to the Comité Européen de Normalisation de Electro-technique (CENELEC), in the electrical sector, to harmonise certain national standards in member states. These

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mandates may concern health, safety, consumer protection or the environment. The new approach provides for mutual recognition of national standards, where this is sufficient to meet the objective of free trade. Once a harmonised standard is agreed upon by majority vote, any conflicting national standard must be withdrawn.

Standards relating to health, safety, consumer protection and the environment, in the case of computer systems, are principally concerned with electrical and mechanical safety and electromagnetic interference. Suppliers will have the advantage that their products will now only need to conform with European standards to permit their use within the EEC. This will be a great saving for equipment suppliers in cost, time taken, and time delays in designing and offering equipment for conformance testing in each country separately.

In addition to formal EEC legislation, the European Commission has done much to promote the acceptance of international standards. In the area of computer software and services, the European Commission positively promotes open standards and works closely with national and international standards bodies.

The European Commission supports work being carried out on the development of the Open Systems Interconnection (OSI) model. Work on this started in 1977, but only really progressed in 1984. The International Standards Organisation (ISO) and the CCITT are the two principal institutional standardisation bodies concerned. Much of the basic work is carried out by feeder organisations, such as the Institution of Electrical & Electronic Engineers (IEEE) and the European Computer Manufacturers' Association (ECMA).

Exhibit IV-1 lists the main computer industry groupings around the world that are involved in promoting open systems. In addition to the Standards Promotion and Applications Group (SPAG), the various standardisation bodies involved in OSI have formed the European Workshop for Open Systems (EWOS) so as to coordinate this work more closely.

The activities of these various organisations include:

- the preparation of standards within the layered OSI architecture
- the specification of functional standards between the layers
- the conformance testing of multivendor products
- the mounting of demonstrator projects to prove implementations
- the development of specific systems such as the industrial factory network MAP (manufacturing automation protocols)

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EXHIBIT IV-1

Major World Computer Groupings Promoting Open Standards

- Standards Promotion and Applications Group (SPAG)—Europe
  - Formed in 1983 by the twelve principal participants in the ESPRIT programme—AEG, Bull, CGE, GEC, ICL, Nixdorf, Olivetti, Philips, Plessey, Siemens, STET and Thompson
- Corporation for Open Systems (COS)—U.S.
  - Comprises the principal computer systems manufacturers and a number of large users of information technology
- Promoting Conference for OSI—Japan
  - Principal Japanese manufacturers

- the application of such systems to an industry (such as MAP within the car industry)

Complementary to the harmonisation of standards is the mutual recognition between member states of each others' testing of conformance to the standards and procedures for certification.

Development of EEC policy on conformance testing is intended to build confidence towards the mutual recognition of testing between member states, including that between national authorities and testing laboratories. The Commission is currently drafting the criteria which will apply to the operation, assessing, accrediting and monitoring of testing laboratories. These criteria may later be given some force in EEC law.

In 1984, SPAG made a specific proposal to the European Commission that there should be a preferential reference to functional standards in public procurement. In the Industry Council of the U.K. Presidency of the European Commission in December 1987, the decision was made (87/95/EEC) on standardisation relating to public procurement orders.

The Decision sets out a programme of work on standards in the computer industry, and to a limited extent in the telecommunications area. It also

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makes it mandatory, with some fairly broad exceptions, for public sector purchasers to use European or international standards in purchases exceeding $110,000 (ECU 100,000). Secure projects (with a very narrow definition) are excluded, but the Decision covers all standards needed to achieve systems interoperability, encompassing OSI standards and all standards for information interchange and data exchange.

The European Commission has placed a contract with CEN/CENELEC to produce functional standards in order to have formally-agreed documents that can be referenced in public procurement. For the first three years they are called ENVs, after which they are published as a European Norm (EN). The ENV is then either revised or withdrawn.

Over 70 mandates have already been issued, and some 21 standards have reached the stage of ENV, or progression to EN. Not all of these mandates refer to OSI; other subjects include banking and identification cards, CD ROM, EDI, programming languages, information processing systems, magnetic media and the safety of information technology equipment.

Large funds are required to support the development of conformance testing. The European Commission has placed contracts with several laboratories and research institutes in Europe, and has offered total funds of $11 million (ECU 10 million). In contrast, in the U.S. conformance testing must be provided by the private sector. In May 1987, the Commission issued invitations for proposals for the extension of its Conformance Testing Service programme, and some 57 proposals were received. Negotiations over a number of contracts took place in 1988.

The Commission's actions also deal with the mutual recognition by member states of certification of conformance. In the information technology sector, an organisation known as the European Committee for IT Certification has been set up to manage certification issues at a European level.

Certification may in principle be carried out by the supplier, by an official conformance testing body, or by a third party. It is important, when tenders are issued, that the type of certification required should be specified, as this may greatly affect the costs of implementation.

There has been significant interest in recent years in the subject of quality standards for software. The work of ISO in this field has resulted in the issue of the standards ISO 9000-9004, which apply to software development, production, installation and servicing, quality management and quality systems. There have also been a number of research projects in the ESPRIT and other programmes, relating to safety-critical software. A European Conference on Software Quality in 1988 indicated a high level

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of interest in adopting ISO 9000-9004 as a European Norm, although there is more interest in product certification than in process certification.

One of the greatest successes of the European Commission in the area of promoting standards for the computer software and services industry has been in the development of international standards for EDI. Work in this area started in the U.K., through the government-sponsored body SITPRO (Simplification of International Trade PROcedures), and the ANA (Article Numbering Association).

This work was picked up by similar organisations throughout Europe, and then by DG XIII under its TEDIS group. Work began on developing international EDI standards under the name EDIFACT. In 1988, TEDIS set up the EDIFACT Board. Today EEC, EFTA and U.S. standards bodies and interested business authorities participate in TEDIS meetings and are jointly working to develop EDIFACT as a truly international standard.

3. Public Sector Procurement

Public sector purchasing is currently governed by two principal directives:

- Directive 71/305/EEC, relating to public works contracts and subsequent amendment
- Directive 77/62/EEC, relating to supply contracts, as amended by Directive 80/767/EEC to bring it into line with GATT

The latter directive is the one which principally affects the computer industry, and in fact the termination in 1981 of arrangements for preferential single-tender purchasing in the computer field brought about the formation of a number of lobby groups within industry to persuade governments to continue to use their influence and purchasing power to develop indigenous industry by strategic use of the exemptions.

The provisions in these directives are aimed at forcing public purchasers in member states to open up their tendering procedures to foreign competition. Directive 77/62/EEC applies to Public Supply Contracts between a supplier and a contracting authority which may be chosen from a specified list of state and local government and other specifically-listed bodies. Bodies administering transport, water, energy and telecommunications services are specifically excluded. The exclusion of data-processing equipment terminated on January 1st, 1981.

The directive applies to contracts in excess of $154,000 (ECU 140,000). Splitting a requirement so as to bring individual purchases below this figure is prohibited. Procurement may be by "open procedure" (whereby

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any supplier may submit a bid) or by "restricted procedure" (whereby there is a prequalification stage in which any supplier may submit a prequalification document), thereby filtering out suppliers who will be unlikely to submit an acceptable tender.

Procurement must be according to technical specifications in a specified order of preference, from standards which are binding by virtue of EEC legislation, other EEC standards, international standards, national standards and any other standards. This is aimed at prohibiting technical standards proprietary to certain suppliers.

Previous attempts to make public sector tendering fairer had not been successful, and so in June 1986, the Commission published its communication to the Council COM (86) 375 setting out an action plan to remedy the situation. The principal objectives of further directives will be to:

- assure a more uniform and complete interpretation and application of the directives
- assure a more uniform use of the exemptions across member states
- mandate that all EEC grants should conform to the procedures
- launch awareness campaigns both at national and EEC level

Particular measures are proposed that will:

- establish a system of pre-information for interested suppliers
- limit the use of the restricted and single-tender procedures
- impose the obligation to use European technical standards
- rationalise the publication procedures and lengthen the time limits

The Commission proposes to set up a public procurement unit, which will police the operation of the directives, and intervene to prevent or punish cases of breach of discipline.

The Commission also proposes to open up the four sectors in which the public procurement directives do not apply—namely transport, water, energy and telecommunications. This is not an easy task for the Commission. Its first step has been to issue the Green Paper on the Development of the Common Market for Telecommunications Services and Equipment, COM (87) 290.

The Green Paper on Telecommunications of June 1987 proposes that "a more liberal and flexible competitive environment for the

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telecommunications services and equipment market is indispensable for the overall development of the EEC's technology and service markets." It proposed the acceleration of existing action lines to ensure:

- the long-term convergence and integrity of the network infrastructure in the EEC
- rapid achievement of full mutual recognition of type approval for terminal equipment
- rapid progress towards opening up access to public telecommunications procurement contracts

It also proposed the initiation of new actions, such as:

- substantial reinforcement of the development of standards and specifications in the EEC, and the creation of a European Telecommunications Standards Institute
- common definition of an agreed set of conditions for open network provision (ONP) to service providers and users
- common development of Europe-wide services
- common definition of a coherent European position regarding the future development of satellite communications in the EEC
- common definition of a coherent concept on telecommunications services and equipment with regard to the EEC's relations with other countries
- common analysis of social impact and conditions for a smooth transition

The Green Paper has had exposure throughout the EEC to a very wide range of interests, and the subsequent paper COM (88) 48 constitutes a progress report. In particular, it identified areas where:

- the development of concrete policy actions seems possible now
- comprehensive policy consensus still has to be worked out
- existing policies must be confirmed or strengthened

The Communication by the Commission to the Council COM (86) 375 also refers to its intention to take action to liberalise services used by public authorities.

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4. Intellectual Property

The laws governing intellectual property (patents, copyright, trademarks and so on) are intended to stimulate innovation and investment in innovation. This is accomplished by awarding the owner of the intellectual property the right, for a limited period, to prevent others from making use of his work. This enables him to benefit from his investment, and preventing others, who have not made the investment, from receiving a similar benefit. In a similar way, business enterprises can protect the reputation and goodwill they have built up through the use of their name or trademark.

Intellectual property rights are essentially negative in character, in that they do not necessarily permit the owner to exploit his inventions (there may be a person with prior rights which conflict); they only permit the owner of the rights to prevent other persons from using or exploiting the invention. These restrictions are in a way contrary to the objectives of a free market, but are permitted to the specified degree in order to obtain a proper balance between the two objectives.

While the Treaty of Rome prohibits measures which restrict imports and exports between member states, it permits restr ctions for the protection of industrial and commercial property. Such restrictions do not permit the owner of the intellectual property rights to use them to divide up the market. For example, a company cannot use these as a means to maintain a policy of differential pricing.

Once any goods, which are the subject of intellectual property rights, have been put on the market in any one member state in the EEC by the owner, or by another party with the consent of the owner, the goods can then be freely moved about and/or resold throughout the EEC. It is important to note that the EEC is viewed in its entirety, so that once the owner of intellectual property has licensed a third party, the owner's rights in the EEC are exhausted and he is not permitted to grant further restrictive licences.

Patent laws were developed in each country independently. Historically, any person wishing to obtain patent protection across the whole EEC had to apply for patent protection separately in each member state. The procedures involved and the rules relating to what is patentable differed between member states.

In 1978, the signatories of the European Patent Convention (which included Austria, Switzerland and Sweden, but excluded Denmark, Ireland and Portugal) made it possible to obtain patent protection in all contracting states. A single application to the European Patent Office in Munich could be made for a European Patent. Member states have also

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undertaken to bring their own patent laws into line with the rules applicable to European Patents.

Although granted in a single application, the European Patent is still a collection of independent national patents. The enforcement and validity is still determined by national laws and courts. Any litigation must be carried out separately in each country, and the results may not be consistent between countries. Thus the rulings on validity and infringement may differ in different countries.

There have been attempts to conclude a Community Patent Convention, under which a Community Patent would be a single patent throughout the EEC and not a collection of independent national patents. The Convention would establish a common body of law, governing litigation on such matters as validity and infringement, and the courts in each member state which would have jurisdiction throughout the EEC.

Almost all the provisions of the Community Patent have been agreed upon. However, because of problems in certain member states, there is as yet no agreement as to when and how the Convention will be brought into force. Ratification of the Convention is included in the 1992 programme, and considerable efforts will be made to bring it into operation in the intervening period.

Trademarks are in much the same state as were patents. Apart from Holland, Belgium and Luxembourg, which have a common system, application for a trade mark has had to be made independently in each country. Moreover, each country has had its own system of testing of what can be registered, and for dealing with conflicts.

The proposed system for EEC trademarks follows a similar pattern to that proposed for patents, in that there should be a Community Trademark giving EEC-wide protection. This would be obtained by one application to a Community Trademarks Office. The Community Trademark would not replace national systems. These would continue to be used by companies wishing to register a trademark only in their own country, or in the event of conflicts arising in an application for a Community Trademark as a result of existing trademarks in different member states.

National trademarks will continue to exist for some time in parallel with an EEC system. In order to reduce the differences between these systems, member states will be required to harmonise their laws in respect of such matters, as the rights conferred by registration and what may be registered. Certain points remain to be agreed, but it is hoped that the regulations will be in operation by 1992.

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While the protection against the copying of software is dealt with under copyright law, in certain circumstances protection can be obtained under patent law. In 1985, the European Patent Office amended its guidelines on examinations in the field of computer software and made it clear that inventions having a technical character may be patentable even if they rely on computer software to achieve their effects.

Matters relating to copyright and piracy arise in the computer business principally in relation to software, including that embodied in a semiconductor chip. The marked increase in software piracy in recent years, resulting from the increasing ease with which copies may be made, particularly those on magnetic media, is following a similar path to that of audio-visual recordings on magnetic and other media. To the Commission, however, the matter is only one of a number of subject areas of copyright applied to printed matter, industrial designs, programmes by radio, television, cable and satellite and audio and visual recordings, and computer software.

While some countries have been taking steps to improve software protection, there has been a growing realisation in recent years that the appropriate regime for the protection of software can be found under the law of copyright, and in particular that programs should be classified as literary works.

In the Cockfield White Paper, the Commission undertook to submit to the Council, before the end of 1987, a proposal for a directive on the legal protection of computer programs in member states. Although unsuccessful in meeting this timescale, in June 1988 the Commission issued a Green Paper on Copyright (COM (88) 172) for discussion with interested bodies throughout the EEC, as a first step towards the drafting of directives. However, this paper deals with all matters subject to copyright. Only one of seven chapters was devoted to computer software, and in over 100 pages devoted to piracy, the piracy of software received a mention in only three paragraphs.

In the Green Paper, the Commission upheld the view that software should be accorded protection by copyright or a neighbouring right, but since a degree of uncertainty still remains in some jurisdictions, it will be necessary to remove this uncertainty by certain legislative clarifications. The Commission therefore questions these clarifications as to whether:

- protection should depend on the form in which the program is stored
- programs which are "commonplace in the software industry" should be protected
- access protocols, interfaces and methods essential for their realisation should be excluded from protection

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- there should be a "broad use right"
- the adoption of a program by a legitimate user, exclusively for his own purposes and within the basic scope of a licence, should be permitted
- reproduction of back-up copies by a legitimate user should be permitted without authorisation
- the period of protection should last for a fixed number of years, and if so how many
- the issue of authorship (including the authorship of computer-generated programs), in the absence of contractual arrangements to the contrary, should be left to national laws
- persons outside the EEC should obtain protection
- in infringement cases the onus of proof of copying should be accorded special provisions

The Commission held hearings with interested organisations on October 6 and 7, 1988, and there was reasonable consensus that:

- there should be a directive to harmonise protection for software
- programs should be protected as literary works under copyright law and not as a neighbouring right
- the same level of credit for originality as for literary works should be applied
- the directive should provide for national treatment under the Berne Convention
- regarding ownership and the burden of proof, harmonisation of laws would be beneficial

There was a certain divergence of opinion concerning the protection of access protocols, and the Commission will take more evidence on this question. The Commission is now proceeding towards the drafting of directives.

In several member states, it was not clear whether semiconductor chips were protected by copyright. The Commission therefore introduced a directive in 1986 on the protection of semiconductor chip layouts (topographies, or mask works). This directive required member states to introduce specific legislation for the protection of topographies, based largely on the legislation introduced in the U.S. in 1984. The U.S. legislation

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only extended protection to the topographies of foreign nationals where topographies of U.S. citizens were equivalently protected in the country of those nationals.

5. Collaborative Research and Development and Competition Law

The Commission is funding a number of pre-competitive research and development projects; Appendixes I to J list EEC-funded projects. The research and development projects have the dual aim of:

- advancing the level of technology available within the EEC
- encouraging cross-border collaboration

In order to conform with these aims, conditions are applied to participation in the ESPRIT Project. For example:

Type A Projects:

- the research and development proposed must be in conformity with the ESPRIT work programme
- proposals must indicate the significant and balanced participation of at least two independent industrial partners, not all established in one member state, who normally should be from producer industries in fields relevant to the proposal (partners from EFTA countries may be admitted, but would not receive financial support from the EEC budget)
- the proposers must also demonstrate a reasonable balance between the participation of producer industries and partners from user industries, universities, and other such institutions
- each partner from a producer industry must make a reasoned assessment of the exploitation potential of the results from a successful project, and give an indication of intention regarding such exploitation

Type B Projects:

Although the majority are expected to conform with the above, the Commission might, in special circumstances, adopt slightly amended rules with regard to collaboration which would be based on such criteria as "the originality and far-sightedness of the thinking behind the proposal."

A company may be interested in participating in such programmes for any or all of the following reasons:

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- it wishes to carry out the work programme of the project but cannot on its own afford the cost or resources which the work programme requires

- its skills and background knowledge in relation to the project are complemented by the skills and background knowledge of its proposed collaborators (often from a different sector of technology)

- it may, together with its collaborators, wish to develop standards in their common interest

- it may, with its collaborators, wish to take advantage of funds offered by the Commission, or by member state governments for which collaboration (in the case of the Commission, cross-border collaboration) is a fundamental requirement

Exhibit IV-2 lists the reasons for entering into collaborative agreements. The cooperation between different parties may take on a number of forms. For example, the parties may:

- agree to share resources and facilities, and share the results

- form a joint company to control the resources and to exploit the results; the participation in the company may be equal or unequal

EXHIBIT IV-2

Reasons for Entering Collaborative Agreements

- An exchange of information
- Joint research
- Joint research and development
- Joint research, development and manufacture on a commercial scale
- Joint marketing
- Specialisation agreements

Such collaborative agreements normally involve universities, polytechnics or research institutes as well as companies. These enterprises differ

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in that universities have limited facilities for exploitation of results, whereas companies operate with this objective in view, and therefore have substantially better exploitation facilities.

Both types of enterprise jealously guard their intellectual property. When there is more than one commercial enterprise involved, arrangements have to be made between them so that each understands the rights and obligations of the other. The negotiation of such collaborative agreements has in practice been a difficult and time-consuming activity for the parties involved, and is the major cause of delay in collaborative projects, in many cases is a major element in the total activity.

Such collaboration agreements could be restrictive in nature, and so could fall within the provisions of Article 85 of the Treaty of Rome. For Article 85 (1) to apply, there must be an agreement between undertakings which affects trade between member states and which distorts competition in the Common Market.

If these collaboration agreements infringe Article 85, they could become void and unenforceable, and possibly attract substantial fines (in the case of companies, up to 10 percent of their worldwide turnover, including the turnover of parents and subsidiaries). However, the Commission usually takes a broad and flexible view. It usually takes the view that agreements between companies which have a record of research and development simply replaces research and development that they could have done on their own.

Article 85 can also be declared inapplicable by the Commission, if the harmful effects of an agreement are outweighed by a number of beneficial elements. The four conditions which must be satisfied before an agreement may be granted are:

- that the agreement in question contributes to improving the production or distribution of goods, or to promoting technical or economic progress
- that a fair share of the resulting benefits are passed on to consumers
- that the only restrictions are those that are indispensable to the attainment of the beneficial results
- that the restrictions do not allow the participants the possibility of eliminating competition in respect of a substantial part of the products in question

If an agreement meets all of the above conditions, an "exemption may be granted either on an individual basis or by way of a block exemption." For an exemption to be granted in an individual case, the parties must

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first have notified the Commission on a special form. As a rule, no fines are imposed during the period between the notification and the decision reached by the Commission. There is no need to notify agreements falling completely within the scope of a block exemption, since they are deemed valid without specific authorisation.

An agreement which falls generally within the scope of a block exemption, but which contains restrictions which go slightly beyond those permitted, may benefit from the so-called "opposition procedure," which provides the result in a shorter, fixed time scale. Providing the agreement contains no "black list" clauses (described below), and the Commission, having consulted the competition authorities in member states, does not oppose the exemption within a period of six months from the date of notification, the agreement will automatically qualify for block exemption.

The Commission also provides a "negative clearance" procedure, enabling parties to an agreement to seek a declaration from the Commission that their activities do not fall within the scope of Article 85 (1) and are therefore not subject to risk. Block negative clearances can also be given, and the Commission may from time to time issue guidelines, in the form of notices, as to the courses of action they may (in the view of the Commission but not necessarily of the courts) pursue without infringing competition rules. Two of these notices are described below.

In 1986 the Commission indicated that in its view certain types of cooperation agreement did not fall within the scope of Article 85 (1). These are principally agreements having the joint implementation of research and development projects or the exchange of experience in, and the results of, research as their sole object. However, the benefit of the notice would be lost if the agreements placed restrictions on the parties on carrying out research and development, on the exploitation of results of the joint research and development, or on the granting of licences to third parties.

A further notice in 1986 (amending an earlier notice dated 1977) indicates that in the view of the Commission (the so-called "de minimis" rule), agreements will not be caught if they are of minor importance. Guidelines are given regarding turnover of the participants and their market share of products in the area of the EEC affected by the agreements.

Commission Regulation 418/85, which came into force in 1985, provides a 13-year block-exemption under Article 85 (3) for certain categories of research and development agreements which would otherwise fall within the scope of Article 85 (1). The regulation defines the limitations on the scopes of agreements which qualify for exemption in great detail, and also provides a "white list" of restrictions which are expressly permitted,

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a "black list" of prohibited restrictions and a "grey list" of obligations which may not fall within Article 85 (1) but which the Commission expressly permits for the avoidance of doubt.

In order to assist enterprises which wish to enter together into a collaboration agreement, the Commission has prepared a draft-harmonised collaboration agreement to serve as a basis for parties which wish to cooperate under the various EEC pre-competitive research projects.

6. Company Law and the European Economic Interest Grouping

As 1992 approaches, more and more companies are becoming engaged in cross-border operations. These result in increased links with other companies, creditors and other parties outside the member state in which their registered office is located.

Over the last 15 years or so, the Commission has produced a series of directives and other proposals aimed at harmonising the laws in member states which apply to limited liability companies. The objective of these directives is to secure equivalent protection for shareholders and others involved in companies in all member states and, by improving the legal relationship between companies through the coordination of company law, to facilitate cooperation between them. Exhibit IV-3 illustrates some of the key areas covered by these directives.

One of the most important issues facing companies that wish to operate as European entities is that at present, it is not possible legally to merge companies in different member states. The only mechanism available is the takeover bid, and the move towards 1992 has been marked by a number of hostile takeover bids, which bring in the Commission as referee in a rather unpalatable situation.

The possible establishment of a European company, first mooted in 1959, has again become the subject for debate through a memorandum issued by the Commission, entitled "Industrial Market and Industrial Cooperation—Statute for the European Company." The Commission holds that creating the right conditions and business atmosphere is the first step. This involves, in addition to harmonising member state laws, making a transnational company possible, independent of national laws. This makes it possible to concentrate assets and compete on an equivalent scale with American and Japanese companies.

A further development of considerable importance is the "European Economic Interest Grouping" (EEIG), defined in Council Regulation 2137/85. It is a new legal instrument facilitating cross-border cooperation in such joint activities as research and development, purchasing, production, marketing, selling, operation of specialised services, quality control

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EXHIBIT IV-3

EEC Directives on Company Law

- Publication of company accounts and branch accounts
- Designation of public limited companies and the minimum capital requirements
- Conditions for mergers and division of public limited companies in the same member state
- Minimum rules for the conduct of takeovers
- Structure of the boards of public limited companies
- Qualifications of auditors
- Minimum rules for the disclosure of changes in shareholdings of listed companies
- Application of the directives to partnerships
- Provision which enables individuals to form limited companies (at present, some member states have a minimum requirement of two persons)

of substances, computerised data processing and the formation of multidisciplinary consortia to tender for public or private contracts. It is directly incorporated into EEC law, thus filling a gap both in the national laws of member states and in EEC law itself.

All the existing possibilities of intercompany cooperation (establishment of joint subsidiaries, intercompany cooperation contracts, joint ventures, etc.) are governed by a specified national legal system and involve certain constraints (formation of a company) or the absence of a suitable legal framework (conclusion of a contract without creating a separate entity). Moreover, the choice of legal system depends on the economic or legal centre of interest of one of the partners, which automatically places the other partner involved on unfamiliar ground, which he views with caution.

The EEIG lays down rules, applicable to all members, on the structure and method of operation, thus providing companies, particularly small and medium-sized enterprises, with a framework which is more capable of responding to their needs and potential. The EEIG will enable

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companies to group part of their economic and legal independence within a structure enjoying full legal recognition.

The aim of the EEIG is "to facilitate or develop the economic activities of its members, and to improve or increase the results of those activities; its purpose is not to make profits for itself. Its activity shall be related to the economic activities of its members and must not be more than ancillary to those activities." Thus no sector of activity is excluded, provided it relates to and does not replace the economic activity of its members. The grouping also enjoys neutrality in respect to profits, both for commercial and for tax purposes, insofar as its profits or losses are taxable only in the hands of its members.

The possibility of forming an EEIG is open to natural persons, companies or firms, and other legal bodies from EEC member states, including certain public bodies or scientific organisations. The regulation gives the members a fairly wide scope for fixing the official address. It must be in the EEC, but it may be transferred from one member state to another, and can even be transferred within the same member state, when the latter has several legal systems, without affecting the legal capacity of the grouping.

The formalities involved in the formation of a grouping are very simple. A contract is concluded and filed at the appropriate registry in the member state in which the grouping has its official address. Registration confers full legal capacity on the EEIG throughout the EEC, and even outside it.

The regulation gives the members of the EEIG a large amount of freedom in organising their internal relations, and in the choice of the grouping's methods of operation. It leaves such matters chiefly to the free choice of the parties. While it does lay down some mandatory and supplementary measures, this is to protect third parties and, to a certain extent, the members themselves. The latter must assess beforehand the extent of their personal commitment. Nevertheless, the principle remains freedom, and there are none of the restrictions imposed on some other types of companies.

The EEIG must have at least two organs—the members acting collectively, and the manager or managers. The members of the grouping, acting as a body, may take any decision for the purpose of achieving the objectives of the EEIG. The grouping is managed by one or more managers who have extensive powers for representing the grouping in dealings with third parties. The latter are protected by means of widespread publicity at the time of the grouping's formation, during its existence, and when it is wound up, and also by the unlimited and joint liability of the members for debts of all kinds incurred by the grouping.

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This personal commitment of the members is the counterpart to contractual freedom, which is the basis of the EEIG, and to the fact that members are not required to provide mandatory capital representing the minimum guarantee offered to creditors.

One of the features of the EEIG is that it does not necessarily have to be formed with capital. Members are free to choose ways of financing the grouping. All types of contributions are possible: in cash, in kind, or in skill (know-how, commercial or professional knowledge, etc.). Members can also decide not to contribute in this way if they consider that the EEIG can operate through the payment of regular contributions, or by making funds available on a current account.

This flexibility in financial matters is important for companies, and for small and medium-sized enterprises in particular, which will thus be able to increase cooperation depending on the opportunities or the results of joint action. Consequently, the EEIG is a completely flexible instrument of cooperation.

The Regulation came into force in August 1985. However, it was not possible to form the first EEIGs until July 1, 1989, in order to give member states time to make their legislation compatible with the requirements of the Regulation. In particular, member states have to set up national procedures for registering EEIGs and publicising the important steps.

7. VAT

There are currently big differences in the way that VAT applies to sales between traders, according to whether or not they are in the same country. If they are, the seller adds VAT to his price and the purchaser claims it back from Customs when he makes his next return. But if the sale is an export, the seller does not charge VAT. If the purchase is an import, the purchaser pays no VAT to the supplier, but pays VAT to his own country's government and later claims it back. The Commission proposes that the following should apply: that the seller charges VAT on the sale and pays it to his government, who passes it on to a central EEC clearing house; and that the purchaser pays the VAT to his supplier and claims it from his government, which in turn claims it from the clearing house.

The amount of the VAT throughout is the amount charged by the seller at his country's rate; it does not matter if there is a different rate in the other country. The payments between national governments and the central clearing house will be in ECUs (European Currency Units), and traders may have to provide extra information to help computation of the number of ECUs.

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This new system will clearly have an impact on companies in the computer services industry, in the observance of VAT procedures. It will also have an impact on computer systems used by the clients of computer service companies.

8. Employment and Social Provisions

One of the essential rights established by the Treaty of Rome is the freedom for people to move and work throughout the EEC. This implies the mutual recognition of qualifications throughout member states, and a number of directives have been issued to this end. This mainly affects professions, such as auditors and doctors, where professional qualifications are required by law, but it also applies to self-employed persons offering services.

The Cockfield White Paper makes no provision for any special measures in the field of employment policy, although there are pressures for employment legislation which would directly affect companies' personnel and industrial relations practices. The 1987 Single European Act already provides for the extension of qualified majority voting to working environment measures. As a result, there is also an extensive plan for health and safety legislation, which although not formally part of the 1992 initiative, is nevertheless seen as part of the progress towards completion of the Internal Market.

Draft legislation on such issues as employee information and consultation rights, worker participation on boards, the right of part-time and temporary workers and the reduction and organisation of working time have been under negotiation for a long time, but with little progress. In particular, the European Trade Union Confederation (ETUC) has been pressing for harmonisation of employment conditions and for the individual and collective rights of employees, including part-time and temporary workers, on such things as legally defined minimum social and labour standards. These would include the right to organise, the right to minimum holidays and protection against lay-offs, and the extension of rights to information, consultation and decision making, particularly in relation to new technologies. It is not unexpected that such matters should be viewed in a more political light than the economic objectives of the 1992 initiative, and there have been some conflicts between Mr. Delors and Mrs. Thatcher in particular, reflecting their respective political leanings. Mrs. Thatcher has alleged that the Commission has been working in certain provisions amongst the 1992 directives aimed at social engineering. The trades unions believe that the Internal Market should have a social dimension as well as a political and financial dimension, whereas employers believe that the purpose of 1992 legislation should be to improve the mobility of labour and to create a more efficient labour market, taking steps in the best interests of the firm and its employees.

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9. Consumer Protection

Consumer protection legislation in member states varies greatly in nature and coverage, and progress towards harmonisation has been slow. Although the principal aim is to protect consumers, some of the directives are relevant to a single market because different national standards and legislative provisions may present barriers to trade, or discourage consumers from buying freely across frontiers.

Directives which affect the establishment of a single market have been issued on the subject of misleading advertising, product liability, doorstep selling, consumer credit, toy safety, and price indication. One such directive establishes common rules on the rights and liabilities of electronic payment card issuers and card holders.

10. Business Services

Although the Treaty of Rome provides for the progressive abolition of restrictions on freedom to provide services within the EEC, less progress has been made in this area than in tackling the barriers to trade in goods. A basic right of establishment already exists which gives firms in one member state the right to compete on equal terms with domestic firms in other member states, provided they establish local offices in conformity with national regulations and obtain authorisation from each member state in which a local office is established. However, in order for a single market to exist, firms must have the right to trade in financial services throughout the EEC without having to establish a local presence and on the basis of a single authorisation from their home member state. Such freedom becomes particularly important in the light of technological developments in electronic funds transfer. Progress is being made, and a number of proposals are being developed that will make substantial progress in the liberalisation of financial services.

A number of directives have already been adopted concerning minimum legal requirements for credit institutions, protection on deposits, the form of accounts and the like, and also concerning transactions in securities. Still in preparation is the second banking coordination directive, which provides for a single licence from the home country to give authorisation to undertake a wide range of banking services throughout the EEC, including deposit taking, lending, money transmission, securities business, underwriting, fund management and advisory services, provided that the credit institution is permitted to do so in its home country. Two related directives provide for the harmonisation of rules on capital requirements.

Two developments in the last two years have accelerated progress in the liberalisation of insurance services, namely a ruling of the European Court of Justice which clarified the law, and secondly, the extension in

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the Single European Act of qualified majority voting into the insurance sector, which has made it impossible for individual member states to block progress in isolation. Immediate results were seen in the adoption in 1988 of an important directive relating to non-life insurances, which provides for a much more liberal regime in insurance against commercial and industrial risks, including the ability of an insurer to cover risks of policy holders in any member state, irrespective of where the insurer is established. This directive must be implemented by 1992 in most member states, but a longer timescale is allowed in the cases of Greece, Ireland, Spain and Portugal.

Progress on the liberalisation of capital movements had varied in different member states. West Germany, the United Kingdom, Belgium and Luxembourg have no exchange controls (apart from special arrangements between Belgium and Luxembourg to maintain their dual system). Denmark has very few controls now, and Italy has made progress in the last year. French residents are generally not permitted to hold bank accounts abroad or in foreign currencies, and other member states retain controls.

A directive removing controls from all capital movements was adopted in 1988, and will apply to most member states from 1990. However, Spain and Ireland only have to comply by 1992, and Greece and Portugal may be permitted a further three years if the Council of Ministers so decides.

The liberalisation of financial services and of capital movements, along with the freedom of accredited banks and insurance companies to establish and to offer services in all member states, will open up more competition in these services, and hence a reduction in prices. Banks and insurance companies will be able to offer packaged deals of services across borders, covering a number of member states. This should reduce banking charges and insurance premiums, particularly in the areas of mortgages, letter of credit, foreign exchange drafts, commercial loans, commercial fire and theft, motor insurance and public liability, which are of interest to companies in the computer business. The expected price falls by territory are given by the Commission, and are shown in Exhibit IV-4.

11. The Development of a Service Market for Information

Of particular interest to the computer services industry are the special provisions relating to the development of an information services market within the EEC. The objectives, as set out in the original proposal for a Council Decision, dated August 1987, are to set up an information services market by the end of 1992, to stimulate and reinforce the competitive capability of European suppliers of information services, to promote the use of advanced information services in the EEC, and to reinforce joint efforts to achieve the internal and external cohesion of the EEC with respect to information services.

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EXHIBIT IV-4

Estimated Price Reductions in EEC Financial Services

Country	Estimated Price Reduction (Percent)
Spain	21
Italy	14
France	12
Belgium	11
Germany	10
Luxembourg	8
United Kingdom	7
Netherlands	4

Source: European Economic Commission

In order to attain these objectives, the Commission has proposed a number of actions, which include proposals for eliminating technical barriers and improving the conditions for information services; initiatives concerning the role of the public sector; launching pilot and demonstration projects; actions in favour of libraries; and the launch of a coordinated campaign to promote the quality of available European information services.

The Commission has allocated $22 million (ECU 20 million) for 1989 and $27.5 million (ECU 25 million) for 1990 for the implementation of the project, and has selected an initial set of priority areas for pilot/demonstrator projects. These include image banks, information on standards, road transport information, tourism information, and intelligent interfaces with electronic information sources.

B

Mergers and Acquisitions

According to statistics provided by the European Commission, 1988 saw a record number of mergers and acquisitions between firms belonging to the EEC—more than 450, compared to 117 in 1983. It is estimated that 1989 will possibly even double the figure from 1988, as companies who

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want to position themselves in different markets realise that organic growth is too slow a tactic.

The activity of non-EEC firms buying up EEC companies is even greater—114 companies were bought by foreign bidders in the month of May 1988 alone. Many of these acquisitions were medium-sized companies, and the majority were under $25 million (ECU 23 million), which indicates that many foreign companies are determined to acquire a presence in the EEC before 1993.

As more and more companies gain awareness and develop their own strategies towards the Single European Act, this activity is likely to increase. The most active country, both in acquiring and being acquired, is the United Kingdom. U.K. companies are much more used to this type of activity than are those of other EEC countries, and access to information about possible acquisitions is more readily available. Many EEC companies are privately owned, and are funded by banks rather than by public shareholders. Since it is unlikely that a totally free company acquisition market will be a reality until beyond 1993, it is possible that U.K. companies could be more vulnerable than others.

Experience has shown that when an event such as the Single European Act creates a strong growth in mergers and acquisitions, many of those acquisitions turn out to have been unwise, with the benefit of hindsight. This was the case following the "Big Bang" in London, in 1986. Cross-cultural acquisitions can obviously be higher risk, and especially in the case of services companies, where the assets are human rather than material, the cross cultures are both national cultures and company cultures.

There is often a major business opportunity for professional services vendors when two companies merge. The problems of different and incompatible information architectures, equipment, software and data communications are often not considered. These conflicts have to be resolved, and take considerable resources to do so.

Because of vested interests and conflicts, external consultants are often brought in to resolve these technical issues. Usually one of the equipment vendors (and sometimes also software vendors) loses out. The professional services vendor that is able to support both sides of the merger locally has a built-in advantage. It is also, of course, not unknown for merging professional services companies to have similar problems, as was the case with Ernst Young, where Arthur Young used Apple and Ernst Whinney used IBM, at the time of the merger.

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C

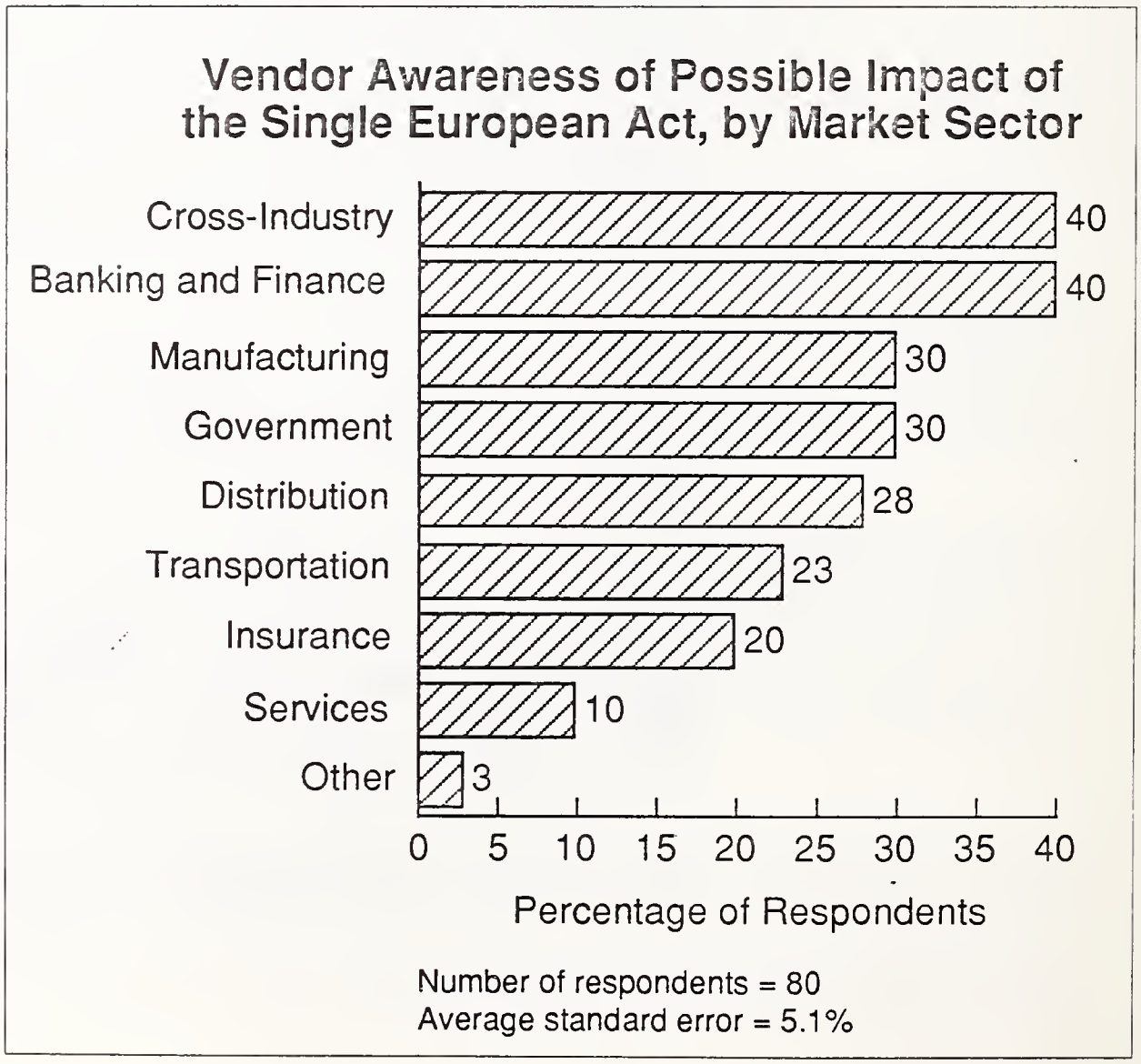
Analysis of Vertical Sectors

Legislation resulting from the Single European Act will affect only specific vertical markets as and when it results in specific traditional barriers being broken down. The impact on end-user enterprises will therefore be piecemeal, vertical sector by vertical sector. In order to gauge which vertical markets are likely to be affected, vendors were asked if they were aware of legislation that would affect their client base.

Fifty percent of the eighty vendors in our survey were aware of some legislation that will affect their client base. There was no evidence to show that larger companies with more resources had more awareness than smaller ones, or that international equipment vendors had greater awareness than independent software and services vendors.

In order to assess the impact of legislation on particular vertical sectors, the forty vendors who were aware of some legislation were asked to specify which industries would be affected. The results, in Exhibit IV-5, show that apart from legislation that would affect all industries, the banking industry was believed to be the most affected, followed by manufacturing, the public sector, distribution, transport and insurance.

EXHIBIT IV-5



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Some vendors expressed concern about the vulnerability of their clients in the face of 1992. This was especially true of some Italian vendors, whose client base has been protected by financial legislation and by favourable conditions in public procurement.

It is not easy to predict with precision what the effect on any particular industry might be. In each case, there is not only the direct effect that comes about as a result of the legislation on that sector, but also the indirect effect of developments in related sectors. Developments in one industry can have a knock-on effect on other industries that are suppliers, and it is even likely that different subsectors of the same industry will develop differently. In heavy engineering for example, lift trucks look likely to involve mergers with the larger companies dominating the market, whereas machine tools are likely to stay dominated by small and medium-sized companies.

In many respects, the Single European Act is not so much creating unique situations as accelerating developments that are already taking place. In order to indicate this catalyst effect, some of the principal industrial sectors are commented upon below.

1. Finance and Insurance

The situation in banking is complex. Some parts of banking such as foreign exchange are already international, but retail banking, which has a high local cultural ingredient, is very highly regulated by each national government and is geared to local cultural requirements.

According to respondents to our vendor questionnaire, banking is the business sector that is identified most often as liable to be affected by the Single European Act legislation. There is a major opportunity for software and services vendors as the major financial institutions attempt to get their systems into shape. The increasingly international nature of banking means that even in those countries such as Spain and Italy that tend to reject packaged solutions, software products, rather than custom software, have greater opportunity. Companies are going through major integration and standardisation processes in order to create uniform management information systems.

This can be compared to some extent to the "Big Bang" that took place in the financial sector in London in 1986. Those software and services vendors that were well placed had many business opportunities. However, there was a significant rationalisation of the client base, as increased competition and overcapacity forced companies to withdraw from the market.

It is highly likely that if an open pan-European banking market becomes a reality, the net result will be fewer banks than currently exist, possibly

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even less than half. This will take some time to achieve, and the changes will not be uniform across the EEC. For example, Spain had seven major retail banks and several small ones, but even the largest were small by European standards. These have been encouraged to merge by the government, and as the banking sector has rationalised, foreign banks, such as two of the major U.K. retail banks, National Westminster and Barclays, have taken over some networks.

The largest EEC banks, shown in Exhibit IV-6, are likely to be making acquisitions in other countries within the EEC.

EXHIBIT IV-6

Top Ten EEC Banks

Bank	Country	1987 Assets ($ Billions)
Credit Agricole	France	214
Banque Nationale de Paris	France	183
Deutsche Bank	West Germany	169
Credit Lyonnais	France	168
Barclays Bank	U.K.	164
National Westminster	U.K.	163
Groupe Ecureil	France	150
Société Générale	France	145
Dresdner Bank	West Germany	130
Compagnie Financière de Paribas	France	122

Other parts of the financial services sector will have similar experiences eventually, but it is likely that in each case the timescale will be different. In insurance, for example, the national industries are generally highly protected, and a great deal of harmonisation will be needed, but eventually a more open market will emerge.

A legal basis for open commercial insurance will be in place by 1990, and a great deal of merger and acquisition activity has already been

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taking place in the last two years. However, the whole process of harmonisation for the insurance sector is likely to take until the next century.

2. Manufacturing

Although the Single European Act is not the single cause, it will certainly accelerate an extensive restructuring of European manufacturing. Some industries, such as motor vehicles, are already pan-European, because they are already global, but others are likely to join them. The hostile bid for Plessey by Siemens and GEC is an indication of this trend.

Many, but not all, companies will be adjusting their manufacturing strategies to a narrower base for each plant. That is to say each plant will become more specialised and will serve a wider market. There will also probably be plant relocations and consequent closures, as companies move to more efficient sites. Conventional wisdom also suggests that there will be winners and losers as the manufacturing base experiences an extensive "shake-out."

There are therefore positive business indications for IS vendors who service this sector, and 30 percent of the respondents to our vendor questionnaire who are aware of Single European Act legislation have identified manufacturing as an industrial sector that will be affected. Restructuring of manufacturing also entails restructuring of each company's computer information system, which could entail anything from additional capacity to a total systems redevelopment.

3. Government and Utilities

Public sector procurement in 1987 in the EEC was worth about $500 billion, and nearly all of it (generally more than 99 percent) is restricted to national suppliers. In the event of an open market tomorrow, there would be gross over capacity in many supply and services sub-sectors which would result in either a massive restructuring, or even as is feared by many a total annihilation of European companies by foreign competitors.

Opinion is divided as to whether there will be a long fight before the open market is a reality, or whether a really significant number of business opportunities are really opening up. Nevertheless, the intention is clear, and consequently there are significant opportunities for companies that can organise themselves effectively, and correspondingly, significant threats for those that do not. For those IS vendors that depend upon clients who serve the public sector, or who service the sector themselves, these threats and opportunities are important.

There are indications from our survey, that the national governments are taking the public procurement provisions seriously, and that these

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markets are already beginning to open up. Given the size of the market, this is a significant business opportunity.

4. Distribution

In order to examine the effects of the Single European Act, the food industry is a good sub-sector to examine, since it is subject to a great deal of legislation by national governments. The most significant development of an open market in the food industry has been the shift within the European Commission from providing a common legislation for all food and drink products, to the principle of mutual recognition of other member countries' products. The emphasis in legislation is therefore no longer to define the consistency of a sausage, but rather to concentrate on the rights of the buyer to know what he is buying, i.e. additives, labelling and packaging.

There are very few companies in Europe that have experience in operating as food multinationals, and most of them tend to be from the United States. There are really only two "European" food companies, Unilever which is Anglo-Dutch, and Nestle which is Swiss. Apart from Unilever, the many (12) British food companies in the top rank tend to be based on a domestic market.

BSN (number one in France) has been very active in trying to develop a pan-European company by acquisition, but are still very reliant on the French market. There are signs that others, such as Cadbury Schweppes (number two in the U.K.), are making moves to strengthen their operations in other EEC countries, but they will not find it easy in this industry to catch up. A case in point is the French company Saint Louis, which embarked on an aggressive acquisition programme to catch up with BSN, but was unable to compete with Nestlé when it tried to buy Buitoni.

5. Transport

As far as road transport is concerned, there is significant doubt whether a really free market in transport will exist in 1993—2000 is suggested as a more realistic date. There are still many national vested interests to protect, and still many fears to allay, such as invasion by foreign lorries. Dutch truckers are already the most aggressive and competitive in Europe, controlling some 30 percent of cross-border traffic. Other EEC trucking nations, especially Germany, are very concerned that their domestic trucking industries could be severely threatened by direct competition with the Dutch.

However, apart from the internal competitive aspects of the industry, their costs should decrease because of the simplification of procedures and opening of restrictions, which should have a favourable impact on

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profitability. Twenty-three percent of the respondents in our vendor survey who were aware of the Single European Act legislation, identified transport as an industrial sector that would be significantly affected.

Perhaps of greater significance will be developments within their client base as a whole. The continuing trend to single-site manufacturing and just-in-time inventory policies implies a consequent need for more transportation, and hence more business for road and rail transport suppliers.

Some progress has been made in air transport to specify some minimum competition, and to replace the bilateral agreements that exist between EEC states. However, conventional wisdom suggests that it is unlikely that air transport will be liberalised to any significant degree.

Every EEC state, as shown in Exhibit IV-7, has its own national airline which is usually state-owned, and perceived national interests are at stake rather than those of particular companies. It has been seen in small and undeveloped nations that having a national air carrier is perceived as some kind of national virility symbol. This is no less so in Europe.

EXHIBIT IV-7

National Airlines of 12 EEC Member States

Country	Name of Carrier
Belgium	Sabena
Denmark	SAS (Scandinavian, but centred in Copenhagen)
France	Air France
Germany	Lufthansa
Greece	Olympic
Ireland	Aer Lingus
Italy	Alitalia
Luxembourg	Luxair
Netherlands	KLM
Portugal	TAP
Spain	Iberia
U.K.	British Airways (denationalised)

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Within the EEC, there is a deregulatory climate. Some influential forces clearly want a more competitive air transport industry, so the situation may change. National airlines are cooperating more and more. The need for, and the potential cost savings from resolving the increasing air traffic control chaos by having a European system may be sufficient to break the deadlock in the long term.

6. Telecommunications

The attention devoted to the rapidly increasing integration of the European economy has been concentrated on the 300 trade barriers due to be lifted by the end of 1992. However, changes are already taking place in Europe's telecommunications services with the national monopolies in mainland Europe, which are being forced to adjust to the single market that Europe has already become in telecommunications services.

Understandably, telecommunications cooperation is high on the Commission's list of priorities because of its economic importance, and because of its fundamental role in knitting the countries of Europe together. The telecommunications Green Paper comments:

> "A technically advanced, Europe-wide and low-cost telecommunications network will provide an essential infrastructure for improving the competitiveness of the European economy, achieving the Internal Market and strengthening EEC cohesion."

Telecommunications is vital to the EEC because it is a large employer and a profitable one: Europe's share of the world telecommunications market is worth $19.25 billion (ECU 17.5 billion), and the industry is set to triple as a proportion of European GDP between now and the end of the century, to around 7 percent. By that time, about $550 billion (ECU 500 billion) will have been invested in telecommunications in Europe, with profound effects on industry and society.

The advantages of this unified market to indigenous suppliers are obvious, and part of the European Commission's mission is to ensure that telecommunications reform produces a substantial "domestic" sales platform from which to attack the worldwide telecommunications market. But the greatest consequence of the European Commission telecommunications reform is the opportunity it provides to coordinate the implementation of technical enhancements to networks and services in a consistent fashion across the entire EEC. The European Commission has already laid down guidelines for the consistent implementation of ISDN, packet-switching and mobile telephone services throughout the EEC:

- complete phased opening-up of the terminal equipment market to competition

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- substantial opening-up of the telecommunications services market, excluding at this stage a number of basic services considered essential to ensure current public service goals and objectives

- the right for services to operate across member states' national borders

- continued exclusivity or special rights for telecommunications administrations (public or private carriers) to supply and operate the network infrastructure, and recognition of their central role in establishing future generations of infrastructures

- clear separation of regulatory and operational functions of telecommunications administrations

- opening-up of the market for satellite ground stations, to the extent that the equipment is associated with terminals rather than with the infrastructure

- recognition that telecommunications tariffs should be responsive to cost trends

- developing consensus in the industry, in order to smooth the transition and to maximise the opportunities presented by the new networks and services for creating employment

- using telecommunications to accelerate economic development and to reduce the isolation of outlying regions of the EEC

- establishing common European positions within the various international bodies (GATT, ITU, etc.)

- creation of a European Telecommunications Standards Institute (ETSI). This is a small core of experts brought together from public and private network operators, as well as experts from industry. The objective is to facilitate the establishment of universal standards and specifications, which are indispensable to an open and competitive market environment and to development of European information technology services.

In addition, the Commission has issued a number of directives covering areas such as:

- liberalisation of purchasing, standards and type approvals for equipment

- funding for a number of major cooperative development projects, such as RACE, ESPRIT, STAR, etc. (see Appendix I)

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- a pan-European digital mobile communications network
- The coordinated introduction of ISDN access on an EEC-wide basis

RACE is the first real test of genuine cooperation between telecommunications administrations, independent suppliers and users. The definition phase of the project involved the basic design of European broadband networks and services, and was carried out by three groups representing over 100 public and private organisations.

The advent of telecommunications competition has more to do with standards and type approvals than with removing import tariffs. The European Telecommunications Standards Institute (ETSI), set up by CEPT, has a key role in producing standards which will be designated as "European" by member governments.

There are some industries where international networks have been in place for many years—in the airline industry for example, the SITA network spans some 170 countries and serves the data communications needs of around 300 airlines worldwide.

Although Southern Europe will display the most dynamic growth over the forecast period, the heart of the European economy still lies in the traditional industrial and trading belt, and it is in these countries that preparations for the integrated market in telecommunications have been the most advanced.

In the U.K., the British Government, following the U.S. example, started to liberalise service provision in 1984, by privatising British Telecom and introducing competition in the form of Mercury. A host of other companies, such as IBM, CSC, GEIS, ICL, Istel and General Motors' subsidiary EDS, was attracted by the rewritten rules and the promise of profitable investment, as traffic could be diverted from the national networks onto their own systems.

The privatisation of BT introduced a new worldwide player into the world market, roughly equal in size to the 11 regional telecommunications operators that resulted from the breakup of AT &T in the U.S. Like many of these regional operators, which are now entering the European market, BT wants to shift the emphasis of its activities from its traditional home base and become one of the service suppliers that survives the competition brought by the single European market and the worldwide market in telecommunications services.

However, whilst BT—along with Spain's Telefónica, which has 47 percent state capital—is the only privately-owned national European operator, it is experiencing strong competition from its counterparts in France, West Germany and Holland. BT, however, is not making the

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assumption that the continuing monopoly status of the PTTs in those countries will, as the liberalisers argue, reduce their ability to respond quickly to new markets and the changing needs of customers.

The contrasting experience of BT and France Telecom in promoting videotex services serves as a clear indication that it is not only privately-owned corporations that can exploit technical advances. BT had a passive attitude towards marketing Prestel initially, leaving the market to exploit it as a new medium.

France Telecom aggressively marketed its Teletel/Minitel service from the beginning. There are now over 4.5 million terminals in France, with over 4,000 private and public services available via the system, the key boost having been the introduction of the electronic telephone directory service which became available nationwide at the end of 1987. Whilst Minitel is widely recognized as contributing to French advances in telecommunications services provision, the rapid modernisation of the network is perhaps a more critical factor: France's network is now one of the most modern in Europe, following a programme of extensive introduction of digital switching and transmission techniques.

France Telecom predicts that by the end of 1989, 75 percent of local exchanges and 76 percent of trunk exchanges will be fully digital, with 90 percent of local transmission circuits and 80 percent of trunk being digital as well. France Telecom is also pushing ahead with the introduction of ISDN, having extended its trial service from the Brittany region to the Parisian basin. Furthermore, data users have access to what is claimed to be the world's largest packet-switching service, Transpac.

Introduced in 1978, Transpac now handles 50,000 direct connections and some 1,000 billion characters a month. Not surprisingly, given the infrastructure, France is following a different route towards liberalisation. A bill passed in 1986 turned the then DGT (Direction Générale des Telecommunications) into France Telecom, a private corporation owned by the state, and some of the DGT's regulatory functions were transferred to the Commission Nationale de la Communication et des Libertés (CNCL).

The CNCL lacks the status and policy-making function of the U.K.'s Oftel. For example, France Telecom retains considerable control over equipment approval policy, a key method of controlling use of the network. More significantly, careful controls on who can provide what service are illustrated by the value-added network regulations, the area where private service suppliers have concentrated their activities.

The new laws give government ministers the power to add a 30 percent surcharge on lines lease for value-added networks. Specific ministerial permission is needed to operate services on lines with a capacity greater than 3.5 or five Mbytes per second for limited (industry-specific) or

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general value-added networks, respectively. Furthermore, the lines are not permitted to carry voice traffic, and the value-added portion must be greater than 85 percent of the final charge, a maximum of 15 percent being allowed for the basic transport costs.

Services such as protocol conversion, a staple of the private suppliers, are not permitted, being considered a basic telecommunications function. Nor are managed data network services allowed—unlike in the U.K.—where the U.S.-owned service providers such as GEIS and EDS have been encouraged to operate. However, although France Telecom is not being privatised, the company does not see this as a problem, believing that protection of the basic service from encroachment enables investment in other areas.

The debate over what is a "basic service" is a key issue in the build-up to the single European market. In the past, basic services were simply voice telephony and telex. However the arrival of new services, which are regarded as basic in some countries but not in others, is muddying the waters. Exhibit IV-8 lists these new services.

EXHIBIT IV-8

New Telecommunications Services

- Packet-switched data networks (PSDN)
- Circuit-switched data networks
- EDI
- Electronic mail
- Videotex
- Teletex

France Telecom regards British Telecom as a major competitor, and the two will compete for status as a switching point for traffic in and out of Europe, considered a lucrative area by the PTTs. They will also be competing for service offerings on the mainland, with BT, for example, leasing circuits from France Telecom to set up and run a private network for international customers. As a result, France Telecom has been working cooperative agreements with the Deutsche Bundespost, setting up Eucom, a joint venture company to operate in the value-added network market, competing against BT and the independents.

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The Deutsche Bundespost has built a modern, efficient network, but has priced its services very high and has resisted, far more than any other of the PTTs, the encroachments of the value-added network service providers. However, West Germany is not isolated from the liberalising trend, partly because of the European Commission's moves in this area.

In 1988, the West German Government introduced a bill to split telecommunications from the Bundespost's postal activities and giro services, so as to separate the regulatory and operating functions and give the new organisation a modern outlook. Whilst liberalisation in the value-added network sector has occurred, Telekom's task will be made difficult by the Bundespost's tariff structures.

The Bundespost tried to price out private networks by charging high rates for leased lines with volume related charges, and by its refusal to approve any but its own terminal equipment. To fight off the private suppliers, the Bundespost's strategy is to push ahead with ISDN, extending the successful trials in Berlin and elsewhere. The strategy is to provide an integrated network supporting voice, data and other communications needs, which will undermine the attractiveness of independent networks and enable West Germany to function as a focal point for pan-European telecommunications.

The Dutch PTT, partly due to its position, has been forced into playing a double role. To give it the commercial freedom to compete for international traffic, the Dutch PTT was turned into a private corporation at the start of 1989. Whilst the PTT will retain a strict monopoly at home, the Dutch are looking at the international arena. The Dutch provided the impetus and the resources for the pan-European managed data network service (MDNS) formed in 1988 by 22 PTTs.

The Dutch will apply strict conditions to value-added network service providers. Providers will have to prove that their services will not jeopardise the basic network before being licenced. This is a vastly different approach from that of Oftel, which requires anyone opposing further liberalisation to prove an economic case against it.

The emphasis of Dutch policy will attract hubbing traffic into and out of Europe, and it is negotiating special circuit tariffs with overseas operators such as Japan's international carrier, KDD. By building extensive telecommunications facilities, the Dutch hope to integrate electronic trading and physical shipping traffic, and to maintain their status as Europe's entrepot nation.

Independent suppliers such as IBM, GEIS, CSC, INS, Istel and EDS threaten to skim off a substantial portion of the PTTs' revenues. To counter this, the pan-European MDNS was launched. However, there are clear conflicts within this framework, and whilst both BT and Mercury

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have indicated support, in reality they both oppose it. Each has its own managed data network service and neither will market the pan-European version in the U.K.

The position of Mercury represents a test of both of the European Commission's commitment to its ideals, and of the monopoly PTTs' willingness to comply with Brussels. Mercury is keen to establish the right to interconnect with all other PTTs, but is experiencing difficulties in this area, as it is regarded with suspicion by the national PTTs.

Typically, whilst the European Commission has ruled in its Green Paper that the PTTs must allow Mercury to interconnect, it has done so in an ambivalent way, leading to different administrations interpreting the ruling in different ways. Mercury's lobbying of both the U.K. Government and the European Commission is slowly bearing fruit, as shown by its successful operating agreement with the Deutsche Bundespost, for example.

In theory, Mercury could take a European PTT to court to enforce the European Commission's directives, but in practice it would be an expensive and long-winded business and the outcome would be unpredictable, since there are no precedents. The European Commission's own course of action, Article 90, has so far proved inconclusive. European Commission directives usually become law through a process where draft legislation goes through committee stages, and is finally approved by a council of ministers. This legislation was enacted under Article 100 of the Treaty of Rome, but the people who drafted the Treaty foresaw that a member state's government might use its veto to block legislation aimed at curbing state monopoly abuse, and so provided Article 90, under which the European Commission can direct members to comply, with or without the agreement of ministers.

The battleground chosen to test the power of Article 90 is the deregulation of the terminal market, one where all members agree on the substance, but not on the method of introduction, making it difficult for members to object without appearing to be merely obstructive. The European Commission hopes to then use the same route to enforce the much more contentious issue of ending PTT monopolies.

France may challenge the use of Article 90 for deregulation purposes in the European Court, thus delaying the whole Single Market timetable substantially. However, in the long term, market forces will force the PTTs to toe the line. Indeed, the agreement between Mercury and the Bundespost indicates that this is already happening. With the U.K. beginning to dominate the market in European telecommunications, especially with regard to the U.S. and Japan, the other PTTs realise that they must liberalise in order to retain their market share.

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There is a danger also, with the U.K. being further down the track in terms of liberalisation, that a coordinated European policy could mean the U.K. market being stifled in the interests of harmonisation.

BT's acquisition of TYMNET is particularly significant. The size and versatility of the network, and its long association with most of the world's major PTTs and data communications users, gives BT an unrivalled platform from which to increase its dial-up network business. Furthermore, it leaves it well placed to compete in the growing market for private data networks.

To date, TYMNET has had little direct competition from the PTTs. Mercury and Televerket (Sweden) even participate as local controllers in the TYMNET network. TYMNET's policy of offering what customers require has kept the network's development ahead of the PTT services. TYMNET's advantage over PTTs has been that it does not rely on X.25 alone, but has a number of delivery mechanisms in and out of the network.

Private network operators in Europe are not used to having a choice. They have been accustomed to being told what they can and cannot have, and paying whatever it costs. All this is changing, as companies such as IBM and EDS prepare to compete with PTTs, particularly in providing specialised business services on a pan-European scale. To foster this, the European Commission is drafting rules for fair competition between PTTs and their future rivals, in its Open Network Provision concept.

The Commission is advised by a panel of 43 PTT and government officials, but only one representative of a user group. Although users gave evidence to the panel, they complain that PTTs are being allowed to write their own rules.

Many organisations are now redefining their communications strategies in light of future developments. One of the key elements in the production of a flexible strategy is the ability to include changes in requirements and to evaluate new services and technologies as they appear. This demands a well-structured set of decision-making criteria which reflect organisations' communications needs and are sufficiently broad to be applied to a variety of communications technologies. Examples of criteria and how they might change in response to the future demands of 1992 are:

- Total cost of ownership of the telecommunications service

  More attention is bound to be focussed on cost, as any investments in international networking will be expensive and highly visible. For some multinational financial organisations, telecommunications is the second biggest cost after personnel. Costs must be tightly managed in this environment.

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- Ability to manage and control the networks

  This may become the single most important factor. The problem of management and control continues to grow as more services and suppliers are used in a network. Managers of technology are being pressured to report on the service provided and to justify the substantial investments made in technology.

- Flexibility

  This necessitates an ability to grow and change, to allow exploitation of new business areas and to provide a simple back-off route from unsuccessful experiments without being saddled with huge bills for equipment and service.

- Conformance with standards

  This is an important criterion due to the increasing acceptance of architectural standards such as OSI.

- Ease of implementation

  This criterion covers the technical requirements of systems as well as their needs in terms of skills, staffing and training.

A corporate communications strategy must reflect these criteria and act as a platform for incorporating requirements arising from new business ventures.

7. Other

The construction industry is a good example of a vertical sector where significant rationalisation is already taking place, and where an associated supply and services market will also be affected.

Eighty percent of the construction market in the EEC is represented by four countries, as is shown in Exhibit IV-9. The largest constructors tend to be French and British. There is already a significant amount of merger and acquisition activity, and it is very common with large projects, to see international consortia bidding for business.

In general, the Single European Act is recognized in this industry as providing significant opportunities for expansion into other national EEC markets, not only for the constructors themselves and their professional services, but also for the supply industries that provide the materials and tools. Greater competition in this industrial sector is highly likely.

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EXHIBIT IV-9

Analysis of European Construction Market

Country	Breakdown of Market (Percent)
West Germany	32
Italy	18
France	18
United Kingdom	12
Other	20
Total	100

The Single European Act may also have consequences that were probably not foreseen, in certain sectors of a particular country. For example, in English-language publishing, the British and U.S. publishers have traditionally divided the world up between themselves. The British get the U.K. and most of the Commonwealth, while U.S. publishers get the U.S. and Canada; the rest of the world is a free-for-all.

The restriction of imports of books from other countries in the EEC is an infringement of competition law and the recently published copyright act. Whether the U.K. and U.S. publishers can settle their differences and stay within EEC law remains to be seen.

In each industry sector, it is necessary to analyse the potential effects of the legislation. To look at just one example of the type of analysis necessary, we can consider the mail order market, and the potential for computers to handle large client lists and inventories. The idea of 320 million consumers is very attractive, but apart from the existing different attitudes, it is not easy to anticipate the consumer reaction:

- Will mail order firms strike it rich?
- Will the market become dominated by one or two players?
- Will European consumers trust foreign advertisers?

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- Will cultural differences prevent achievement of a homogeneous market?
- If there is no price advantage from one country to another, will there perhaps be no change in demand patterns?
- Will it only effect the small niche companies selling very specialised items by widening their potential markets?
- Will the fragmentation of the advertising media deter small companies from competing in other countries?
- Will this create an opportunity for localised pan-European media brokers?

Similar questions are being asked in many industrial sectors, and the answers are not always obvious. The trend towards a more homogeneous market with 320 million consumers represents not just a widening of existing opportunities into pan-European markets, but also the creation of new opportunities in new markets with new products and new services.

The computer software and services sector is being presented with opportunities that are not only extensions of existing offerings, such as software products being adapted (e.g., pan-European accounting packages), but also the possibility of developing new products and services (e.g., new software for VAT reconciliations).

D

Key Computer Software and Services Issues

The completion of the Common Market in Europe will progressively remove the barriers to trade within the EEC. As Exhibit IV-10 illustrates, this removal of the barriers will give rise to opportunities, but also to threats. In particular, it will increase the available market, but it will also increase the competition. It will open up new markets, but it will bring to an end the national soft options enjoyed by some. It will reduce the costs of supplies and services, but it will increase the cost of marketing, since companies will have to look to other member states in order to compensate for sales which they may lose on their home ground.

Every company will therefore have to go through a period of change and adjustment to market conditions. Small companies have more to gain than large companies, and those businesses which benefit from economies of scale will do so if they gear up their operations accordingly. Small companies will be operating in a larger market in a more open competitive environment, often in competition with large companies. Many small companies will have a hard time if they do not react to the new market environment. Some will find that the only solution is to increase the size of their operations by merging or other means.

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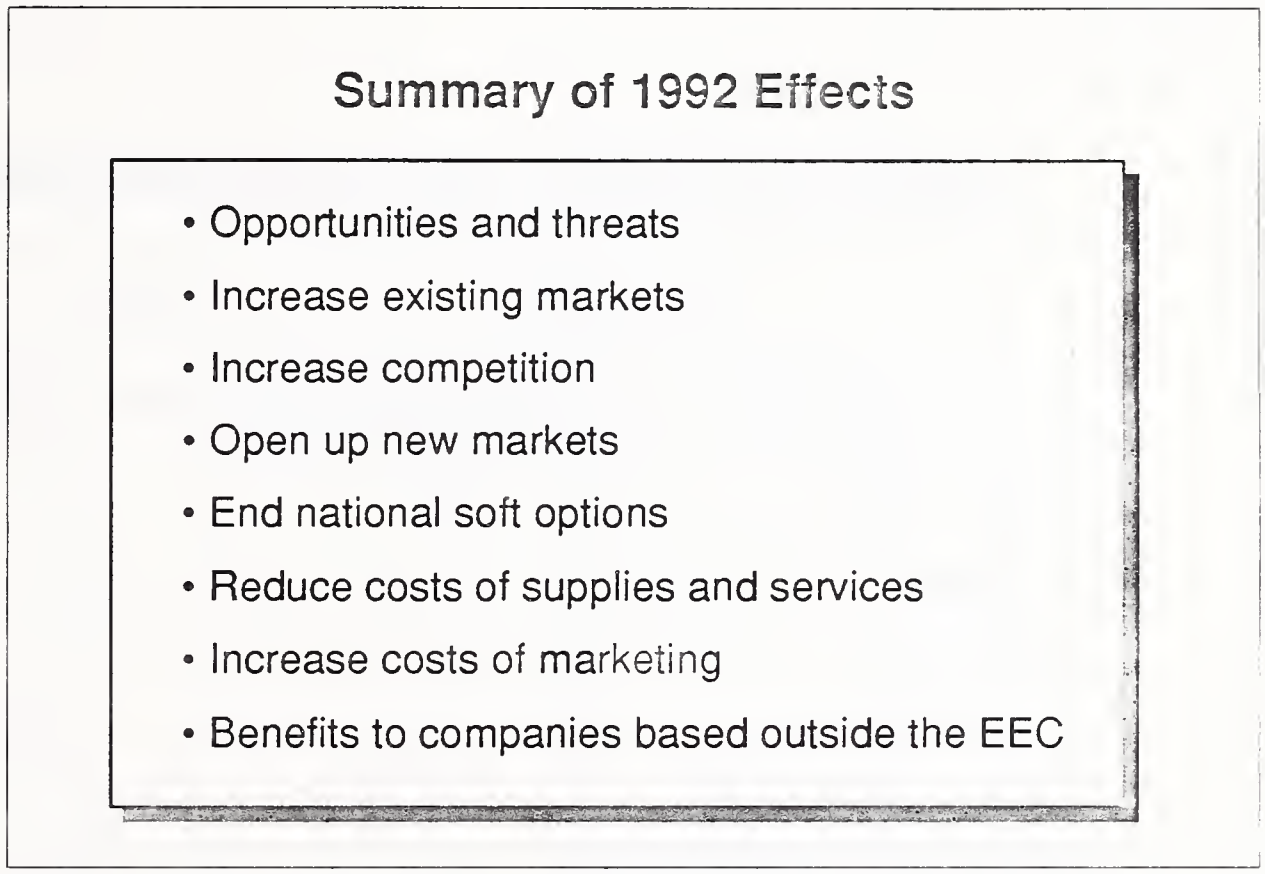
EXHIBIT IV-10



It will not be only European companies that benefit, however. Companies based outside the EEC will now have only one barrier to surmount and will then be able to operate from one base into a single market covering the whole EEC. U.S. and Japanese companies will be quick to take advantage of this situation, which will increase the competition for companies in member states.

The European Commission recently published the results of a range of studies relating to the "Cost of non-Europe." One, prepared for the Commission by Peat Marwick McLintock, analysed the use of business services and in particular, the amount of "externalisation"—that is, the relative use of external business services as opposed to internal resources.

The degree of externalisation for various business services (expressed as a percentage) is found to be 41 percent. That is to say, 41 percent of business services are entirely subcontracted. Thirty percent of business services are provided exclusively in-house, 26 percent are provided in combination and 3 percent are provided by a parent or subsidiary company. A complete breakdown by different sectors of business services is shown in Exhibit IV-11. Computing services are relatively low in pure externalisation but are, in fact, the highest amongst those which are effected by a combination of both external and internal services. A breakdown of these results for Computer Services by sector is shown in more detail in Exhibit IV-12.

In general, despite a trend towards externalisation, computer services rarely tend to be completely externalised. This applies particularly to

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EXHIBIT IV-11

Degree of Externalisation of EEC Business Services

Sector	Percent			
	Purely External	Combination	Purely Internal	Subsidiary
Engineering	62	18	14	6
Management consultancy	64	14	16	6
Advertising	49	25	24	2
Public relations	11	30	59	0
Computing services	22	55	26	0
Research & development	12	23	58	7
Financial review	50	18	30	2
Operational services	58	17	22	3
Legal services	41	37	21	1
Total	41	26	30	3

Source: Peat Marwick McLintock

software, data processing and facilities management, which all have a high company-specific element. Consultancy is the sector most frequently completely externalised, the reason cited being the need for a dispassionate strategic overview of information technology strategy and direction.

Computer services are, however, generally characterised by a high degree of combination of internal and external sources in the provision of service. This reflects a number of factors: the need for specialised resources, the difficulties of retaining information technology people, the need for company-specific input, and the need to manage projects, in a field that is prone to problems. Communications services and facilities management are the only two services with a significant degree of purely in-house provision.

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EXHIBIT IV-12

Degree of Externalisation of EEC Computing Services

Sector	Percent			
	Purely External	Combination	Purely Internal	Subsidiary
Software development	7	73	20	0
Remote data processing	6	56	38	0
Computing consultancy	29	47	24	0
Information services	13	51	36	0
Communications services	20	25	55	0
Facilities management	9	30	61	0

Source: Peat Marwick McLintock

There are conflicting trends within computing services, towards both externalisation and internalisation. The increasing level of computer literacy and the speed of technological development have made computers a much more broadly available product, with greater penetration in business management. These trends have enabled greater internalisation of computer services. At the same time, forces towards externalisation are the supply and demand of staff (particularly in the public sector), the increasing complexity and level of knowledge required to build and support systems, and the one-time nature of large projects.

The degree of externalisation, by country, for five of the more industrialised EEC countries is shown in Exhibit IV-13. France has the highest percentage of exclusively externalised business services (56%) and the lowest degree of combined provision (14%). Italy follows a similar pattern, with 47 percent externalised and only 18 percent in combination. The United Kingdom and the Netherlands show an extensive use of externalised and combined services (i.e., low internalisation).

The result of these conflicting trends is a very mixed pattern of externalisation of services. Most companies report that when computers were first used in their businesses, services were performed externally, both because of lack of internal expertise and the investments required for the hardware. A clear switch took place in most businesses towards

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EXHIBIT IV-13

Degree of Externalisation of EEC Business Services by Country

Country	Percent		
	Externalisation	Internalisation	Combination
France	56	30	14
Germany	32	47	21
Italy	44	37	19
Netherlands	39	18	43
United Kingdom	34	23	43
Total	41	31	28

Source: Peat Marwick McLintock

internalisation when hardware developments and the growth of expertise allowed. The provision of computer services in a business now tends to depend on the relative importance of the factors mentioned above. However, with the increasing pressure in companies' operations resulting from the opportunities which will arise with 1992, there is likely to be an increased use of subcontracting for specialist services.

Seventy percent of firms buy some of their externally provided services from a foreign-owned firm. Nationality seems not to be a factor in the selection of subcontractors, work being awarded on the basis of the most favourable tender. Specific reasons given for using a foreign firm are a policy by overseas subsidiaries to use local firms, the reputation of foreign firms in certain fields (mainly computer services, consultancy and audit), and the need for advice on foreign markets or legal and taxation systems.

Reasons for not using foreign firms are the inadequacy of locally available services, language, cultural and geographical barriers, and lack of information about the availability of foreign services. However, in computer services specifically, only 5 percent of services are placed within other EEC countries (and a further 5 percent in non-EEC countries). This is probably because the strong growth of domestic markets in computer

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services has meant that companies have not, until now, needed to turn their attention beyond national frontiers. This would suggest that there is an opportunity for the export of computer services within the EEC, particularly in specialist fields.

Most purchasers are seeking to reduce their number of suppliers. This trend results from the ever-increasing need to build up confidence in the quality of supply, which in turn depends on an established relationship between purchaser and supplier. The cost of inadequate quality is enormous, and the cost of establishing quality is related to the number of purchaser/supplier relationships.

Those who apply information technology to their business are more and more looking to one supplier who can supply their total needs, including hardware, software, communications expertise and training. There are many companies in the business who do not supply the whole range of goods and services required. If they are to compete effectively with those who do, they will need to cooperate with other companies in some form of grouping or consortium, so that the suppliers can jointly share the responsibilities involved and act as a single supplier from the point of view of the customer. Often one company will take the lead position as project manager.

This trend is becoming increasingly recognized, and some companies are taking steps to seek suitable partners within their own country with whom they can establish cooperative relationships. However, in the light of the increasing need to operate within the total European market, many companies may find it advisable to consider making such alliances within a European dimension.

Each company will, in its own way, be affected by the changes in the business environment and will need to readjust its operations and methods. Many of these changes, such as in accounting systems and in response to tax changes, in particular the Value Added Tax, will affect the services provided by computer systems, which will have to be modified to suit. Companies are therefore expected to develop their own computer systems, and computer service companies should be ready to respond to these opportunities for business.

Companies can also expect the Commission to increase its vigilance as to the observance of competition rules. Companies will therefore have to pay increased attention to observance of the rules and to take careful account of them in the restructuring of their operations.

The Single European Act makes provision for the establishment of a European Court of First Instance, which will relieve the case load of the European Court of Justice which has become increasingly overworked in recent years. This new court will take over some of the jurisdiction from

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the European Court of Justice on such matters as competition cases, so that companies which wish to appeal against decisions of the Commission under competition rules will have their cases heard more quickly and with the assurance of a more full investigation of their complaints. Such jurisdiction will, however, be subject to a limited right of appeal to the Court of Justice on matters of law.

In summary, the computer software and services market will benefit by:

- an increased demand in business, resulting from the increased operations of its clients
- a temporarily increased demand in business resulting from the changes made to clients' computer systems to accommodate changes brought about by 1992
- an increased demand in business resulting from the increased contracting-out of services as a result of clients' utilising more of their own resources for mainline activities
- an increased opportunity for business in other member states
- a reduction in costs of business and transportation services

These advantages will be offset by:

- increased competition, from competitors both inside and outside the EEC
- the tighter observance of anti-competition rules within the EEC

Companies will need to:

- consider the advantages of forming alliances with other suitable companies in order to be able to present packaged deals for computer equipment, software, services and training
- consider the advantages in forming such alliances with companies in other member states in the EEC
- review the infrastructural programmes initiated by the European Commission, in particular the Structural Funds, and consider forming alliances in the less developed countries as a means of access to EEC funding for developing computer services in those regions

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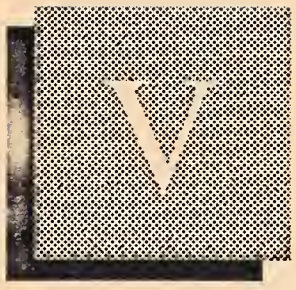

Vendor Attitudes towards the Single European Act

V

Vendor Attitudes towards the Single European Act

This chapter reviews the research undertaken by INPUT for this report on the attitudes of software and services vendors towards the Single European Act and its likely impact on creating a single European market in the 1990s.

This research considered three principle concerns:

- general vendor attitudes towards the importance of the Single European Act
- vendor attitudes towards specific aspects of the Single European Act legislation
- vendor attitudes towards specific factors that might inhibit the development of a single European market

It also considers the opportunities and threats seen by vendors from the Single European Act.

A Importance of the Single European Act

The Single European Act will affect every area of European business to some degree during the 1990s. The European Commission's 1992 campaign has been a great success in making every EEC country aware of the Single European Act, but many individuals are not clear as to what the real impact will be on them and their work.

To try to gauge how the computer software and services industry feels about the Single European Act, INPUT asked 80 vendors around Europe a number of general questions concerning their attitudes towards the 1992 initiative, and how important they felt the Single European Act was to them and their businesses. Exhibit V-1 illustrates the results of this research.

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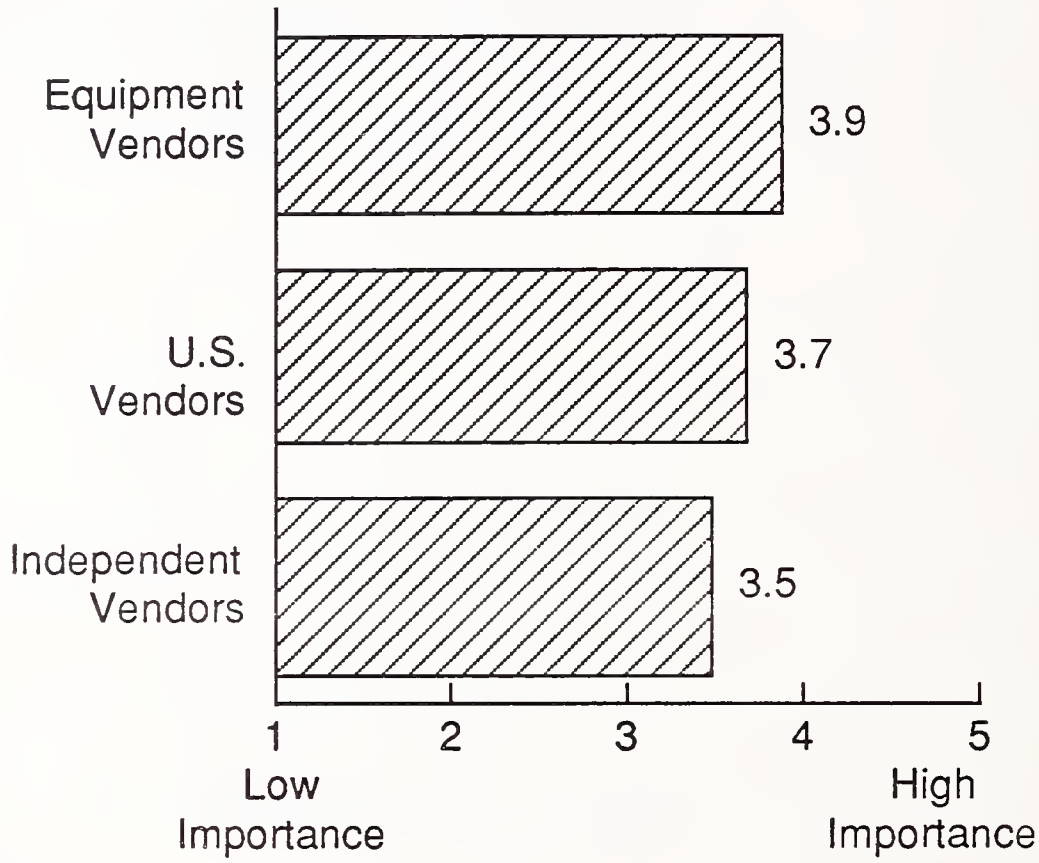
EXHIBIT V-1

Vendor Attitudes towards Importance of the Single European Act, by Vendor Type



Number of respondents = 80
Average response = 3.7
Average standard error = 0.2

The average response of 3.7 on a scale of 1 to 5, where 1 indicates a low importance rating and 5 a high importance rating, only expresses an attitude by vendors that the Single European Act is "reasonably important" to them. This is a relatively low rating for a major set of legislation that will undoubtedly have major long-term consequences for all of them. This is especially surprising, as vendors did indicate that the 1992 initiative was the major issue facing them today.

Although Europe is fully aware of the Single European Act, this moderate rating can probably be explained by the fact that individual vendors are not seeing that the Single European Act will have any immediate consequences for them. However, through further analysis of this research, it appears that those individuals who are more involved in being "European" consider the Single European Act as being significantly more important than do those whose outlook is principally domestic.

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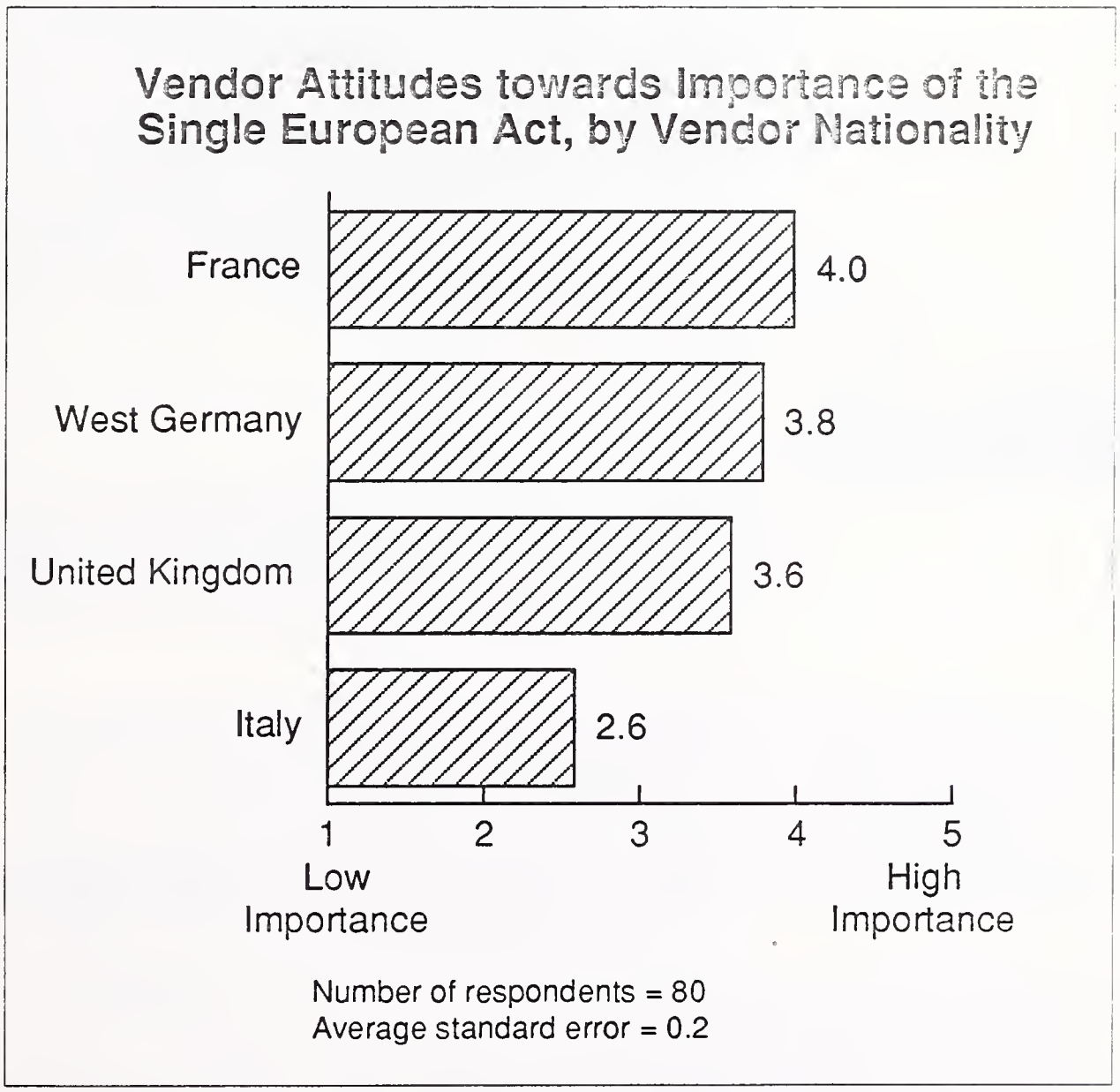
Exhibit V-1 shows that equipment vendors rate the importance of the Single European Act more highly than to independent vendors, with U.S. vendors being in between these two extremes. Since equipment vendors generally have much larger organisations than independents, and so are more pan-European, this result can be interpreted as indicating that the more international a vendor is, the more important the Single European Act is considered.

Exhibit V-2 analyses this research by showing the response for vendors living in the four largest EEC member states. This shows considerably more variation than Exhibit V-1. French vendors feel that the Single European Act is definitely important, but Italian vendors consider it to be rather unimportant.

EXHIBIT V-2



This Italian result might seem slightly surprising, as Italians are in general very enthusiastic about the EEC. Exhibit V-2 shows a significant difference between Italian vendor response on the one hand and French, West German and U.K. vendor response on the other. The major

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difference between Italian software and services vendors, and vendors from the other three countries, is that Italian vendors have not evolved into export markets, apart from a handful of very large companies. Many medium- to large-sized vendors in the other three countries are involved in some form of export to other EEC or European nations.

These two analyses of this research, by type of vendor and by nationality, both indicate that the more involved an individual vendor is in foreign European markets, the higher the importance rating is for the Single European Act. This raises the question of whether those vendors who are still domestically orientated simply do not appreciate the importance of the Single European Act, or if they genuinely understand that it is of less importance to them than to the more international vendors.

INPUT feels that the Single European Act will have repercussions in all software and services markets at some time during the 1990s. INPUT therefore believes that it is wrong for any vendor to underestimate the importance of the Act. If the more nationally biased vendors are not following the developments stemming from Single European Act legislation, and believe that the Act is unimportant for them, INPUT believes that they will miss opportunities in the 1990s and will be at a disadvantage relative to those vendors who have a better appreciation of the whole 1992 initiative.

B

Implications of the Single European Act

1. European Vendors

The ramifications of the Single European Act are very wide-ranging. In previous chapters, some of these have been discussed. The principle aim of the Act is to gradually bring down the traditional national barriers within the EEC by:

- reducing physical barriers
- reducing technical barriers
- reducing fiscal barriers

For the software and services industry, any reduction in physical barriers will principally assist customer service vendors. Technical barriers affect all vendors, whilst fiscal barriers tend to affect those larger vendors making significant investments throughout Europe.

To determine vendor attitudes on how much the Single European Act is seen to be effecting change, INPUT asked vendors how much they felt the Act was affecting the overall business environment. Twelve aspects of potential change were suggested to vendors by INPUT, and a summary of the results is shown in Exhibit V-3 and Exhibit V-4.

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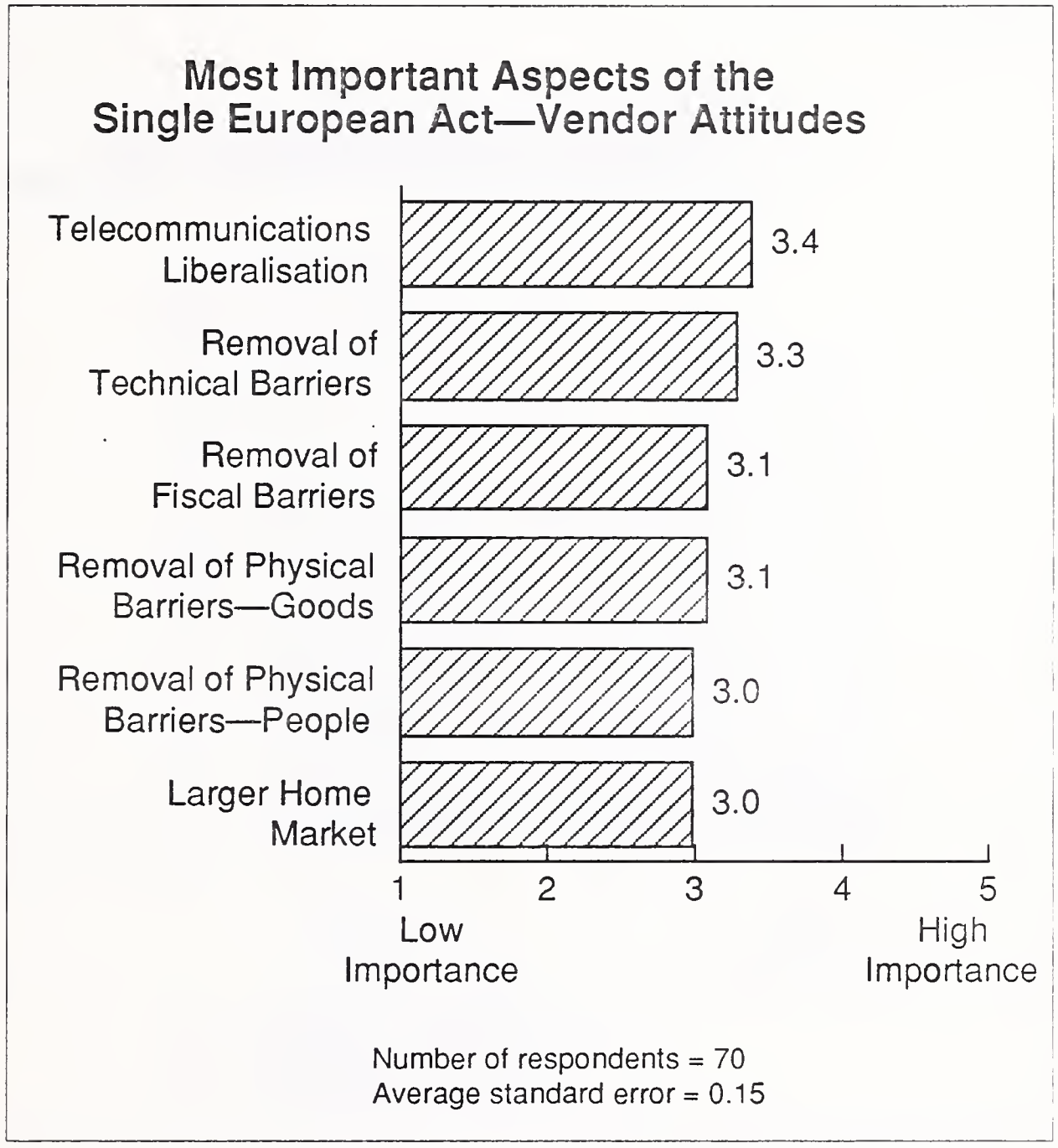
EXHIBIT V-3



Telecommunications liberalisation and the removal of all barriers were identified by vendors as being the most important aspects of the Single European Act that would affect the general business environment and their operations. The least important were those areas of the Single European Act that would free taxation and remove restrictions on where to live, work and set up business.

Analysing this research in more detail, INPUT found that the response to questions on most of these 12 aspects showed little agreement amongst vendors. Exhibits V-5 to V-16 illustrate the distribution of replies to the 12 different questions in the order of most important to least important, as indicated in Exhibits V-3 and V-4.

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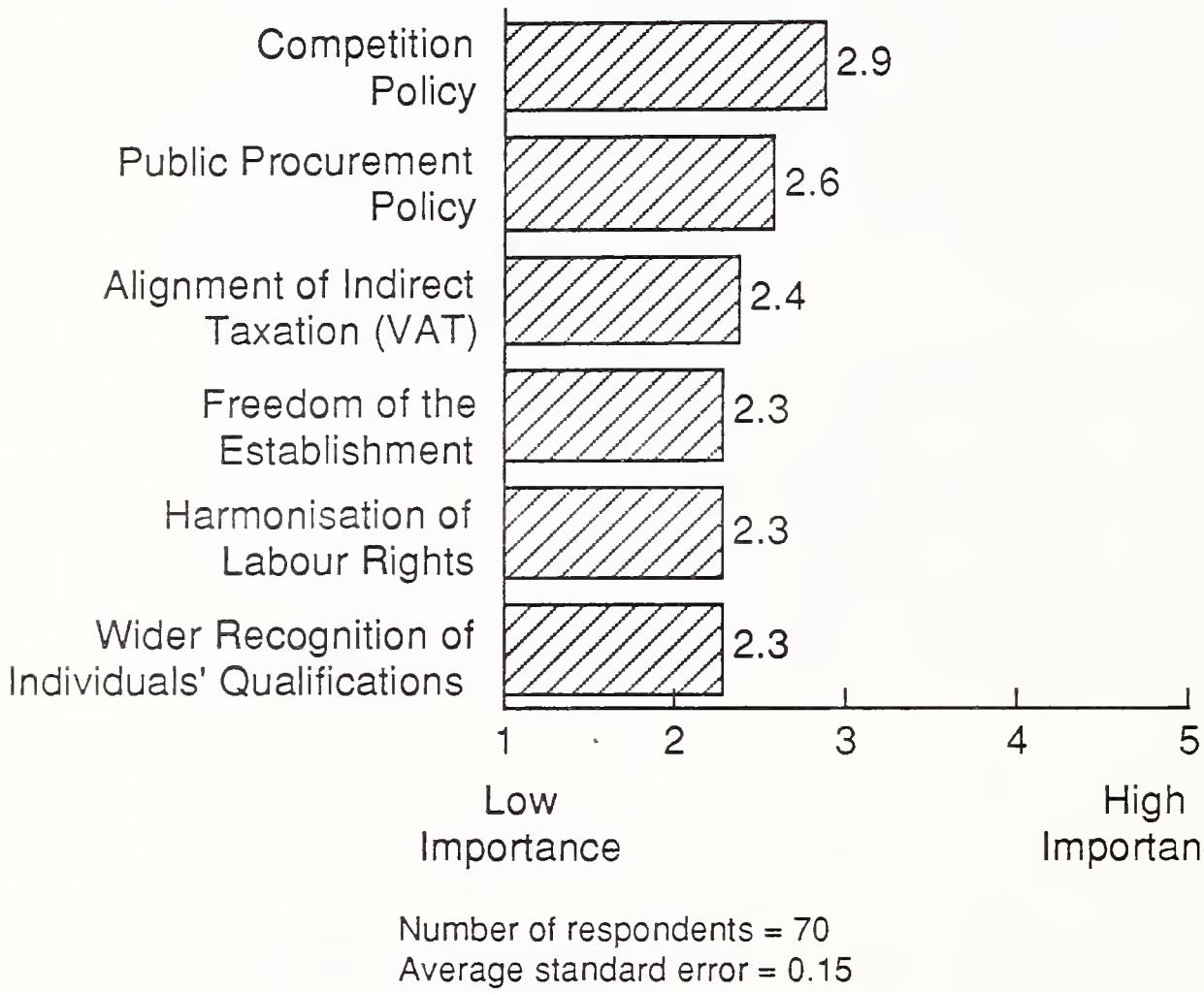
EXHIBIT V-4

Least Important Aspects of the Single European Act—Vendor Attitudes



Number of respondents = 70
Average standard error = 0.15

Although telecommunications liberalisation was seen as likely to have the most important impact on software and services business, as Exhibit V-5 illustrates, nearly 20 percent of respondents thought that it was of very low importance compared with 60 percent that saw it as important, or very important. Similarly, in Exhibits V-6 to V-9, the impact of the removal of different national barriers was seen by some vendors as very important and by others as of no importance.

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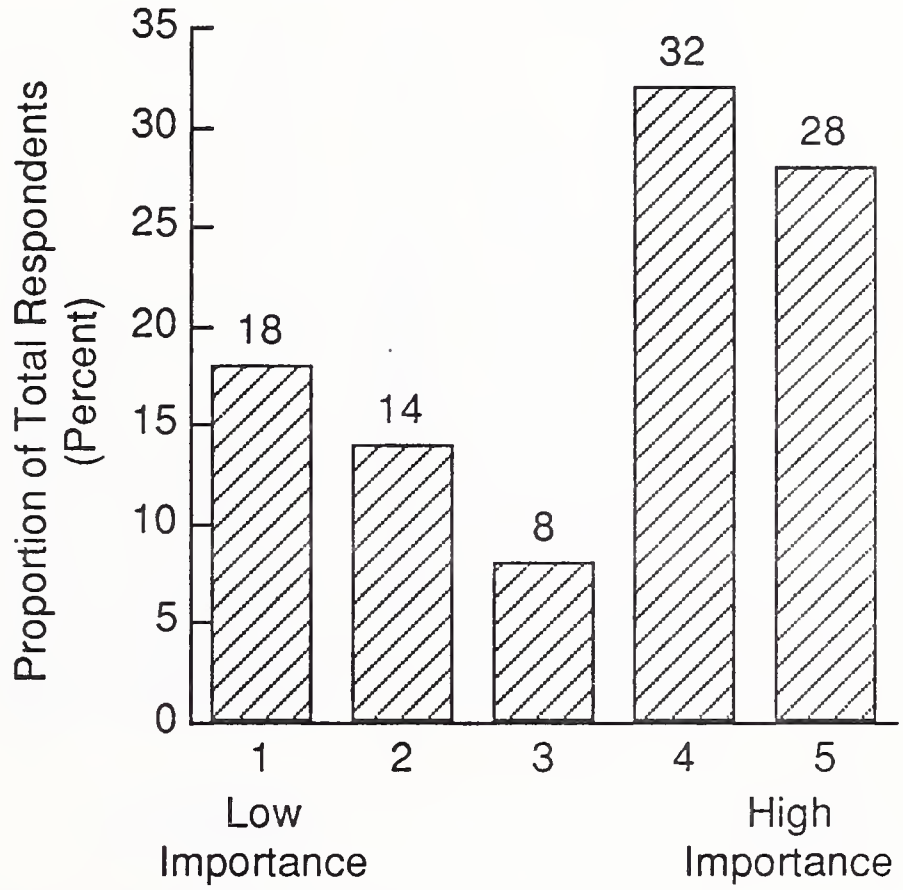
EXHIBIT V-5

Vendor Attitudes towards the Single European Act— Liberalising Telecommunications



Number of respondents = 72
Average response = 3.4
Average standard error = 0.17

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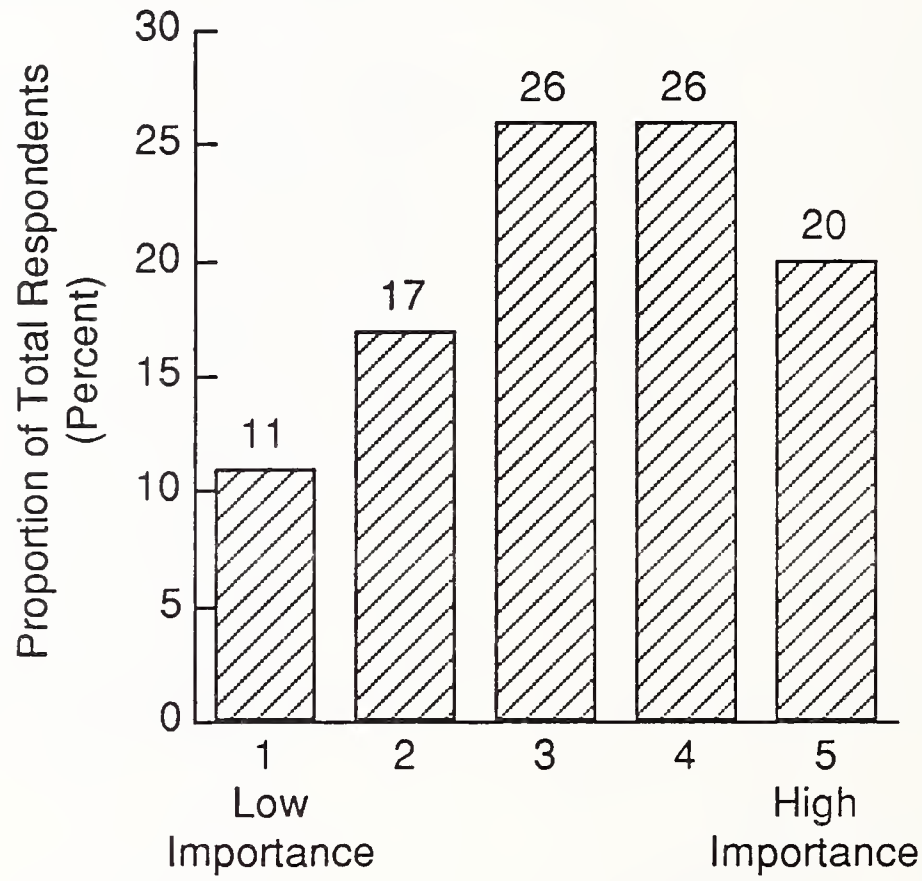
EXHIBIT V-6

Vendor Attitudes towards the Single European Act— Removing Technical Barriers



Number of respondents = 70
Average response = 3.3
Average standard error = 0.15

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EXHIBIT V-7

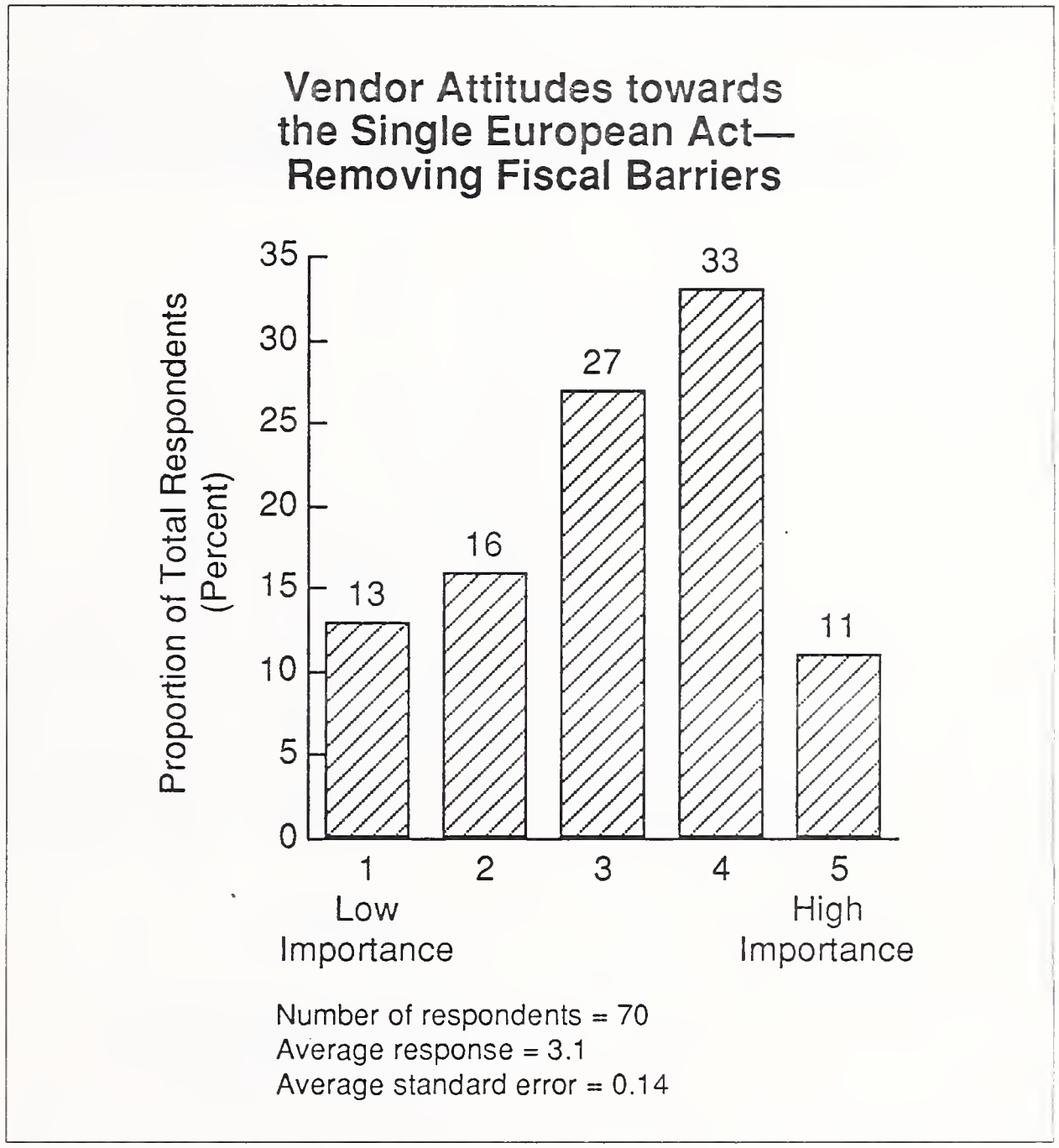

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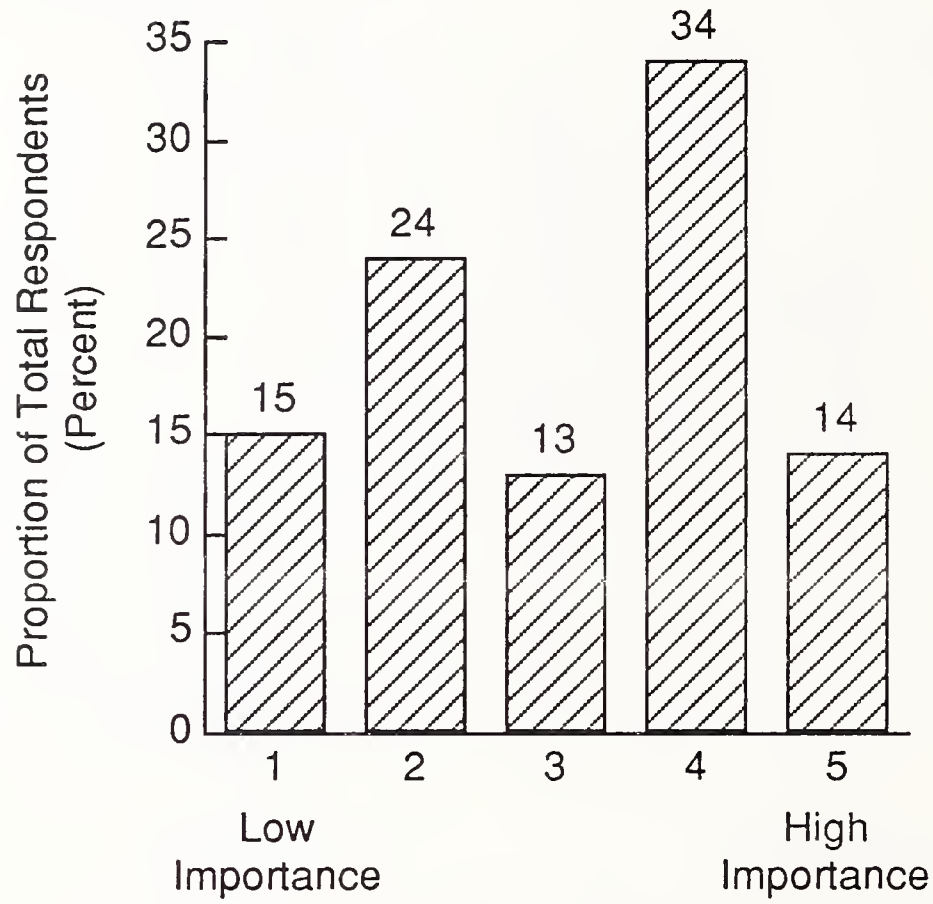
EXHIBIT V-8

Vendor Attitudes towards the Single European Act— Removing Physical Barriers for Goods



Number of respondents = 71
Average response = 3.1
Average standard error = 0.16

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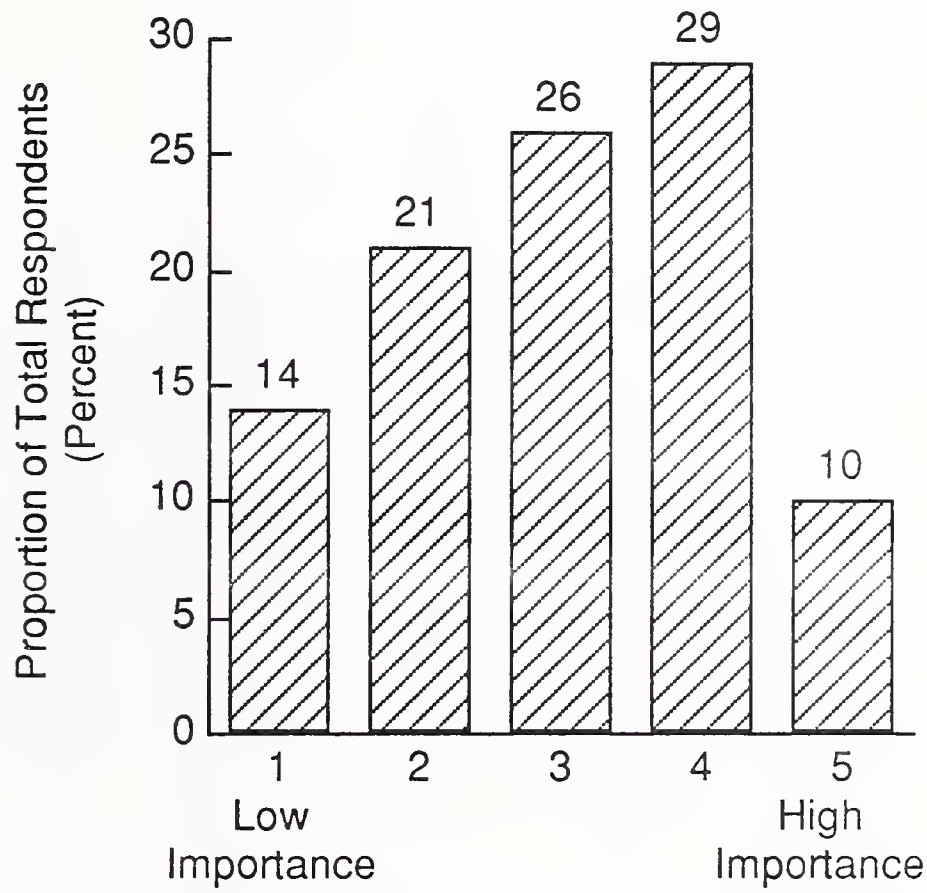
EXHIBIT V-9

Vendor Attitudes towards the Single European Act— Removing Physical Barriers for People



Number of respondents = 70
Average response = 3.0
Average standard error = 0.14

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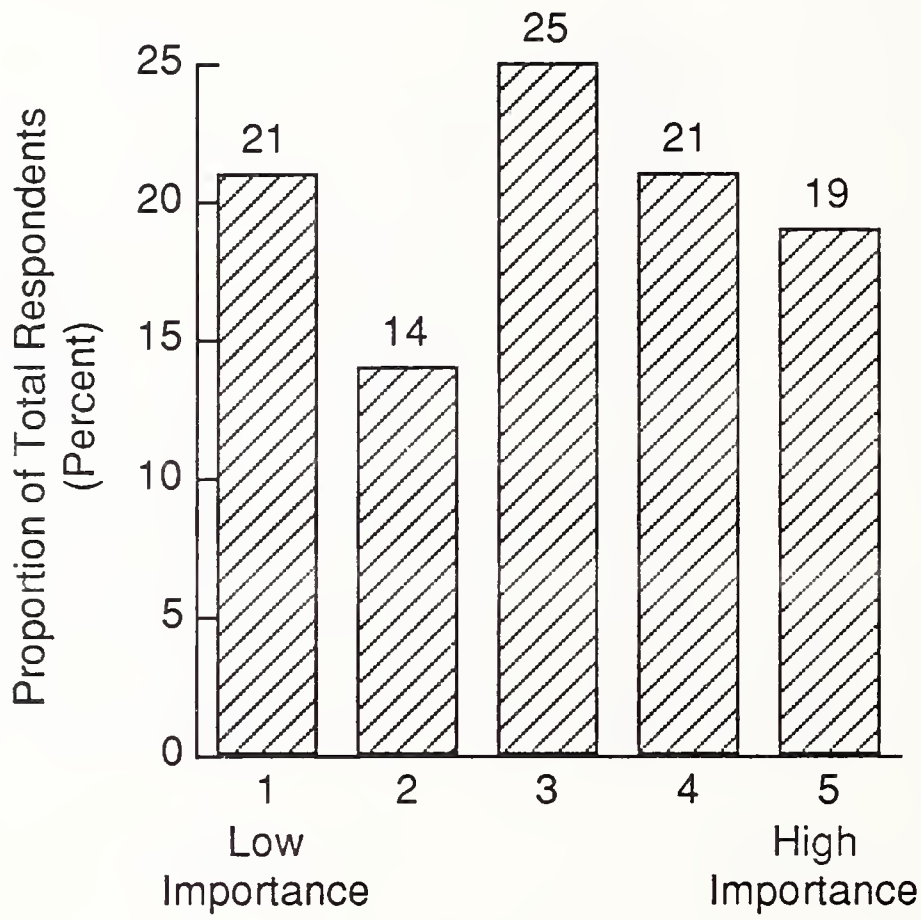
EXHIBIT V-10

Vendor Attitudes towards the Single European Act— Creating a Larger Home Market



Number of respondents = 72
Average response = 3.0
Average standard error = 0.16

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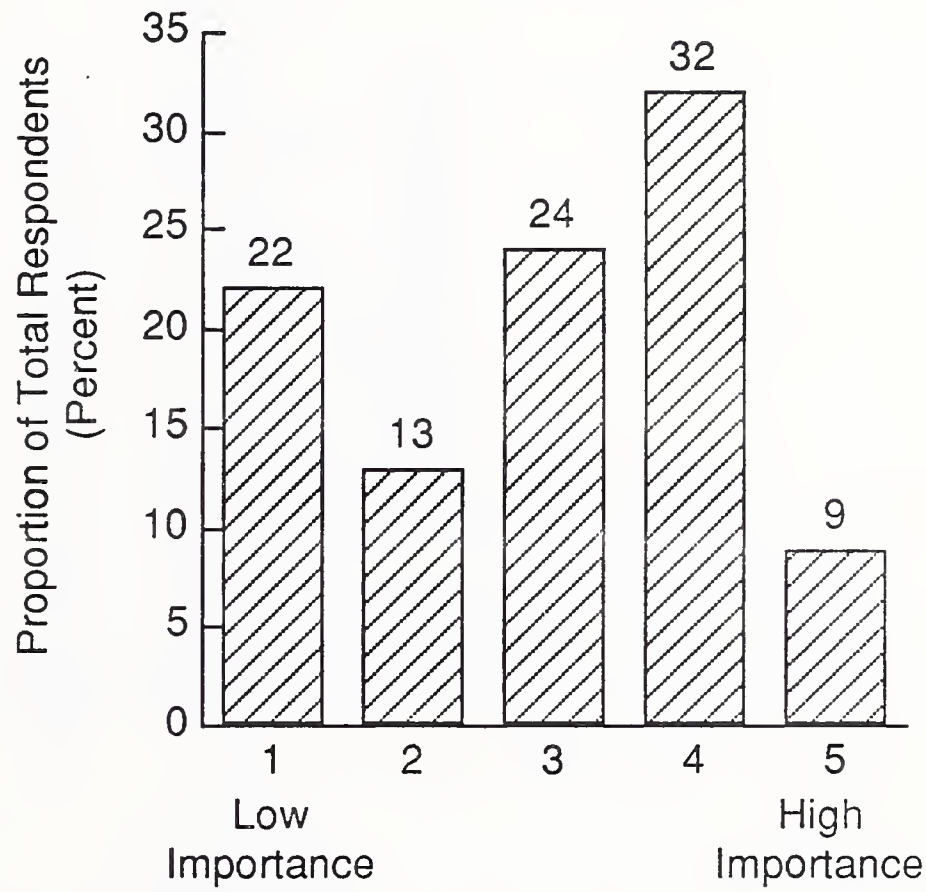
EXHIBIT V-11

Vendor Attitudes towards the Single European Act— Effecting Competition Policy



Number of respondents = 68
Average response = 2.9
Average standard error = 0.16

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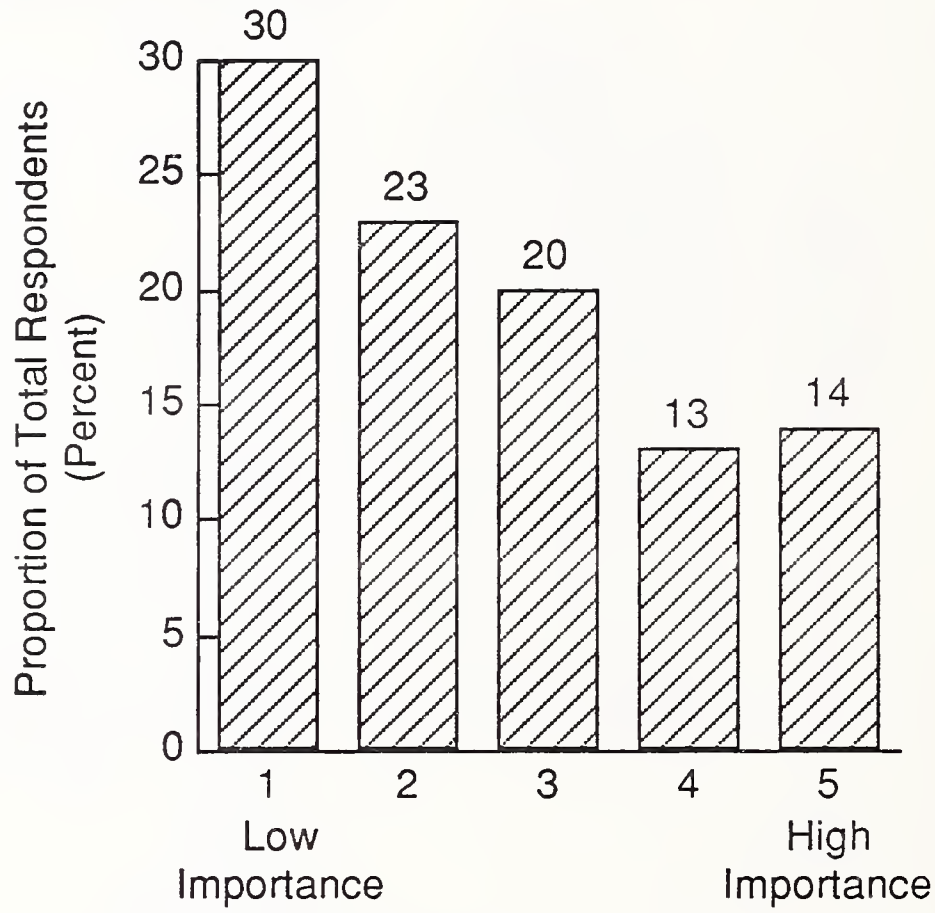
EXHIBIT V-12

Vendor Attitudes towards the Single European Act—Enforcing More Open Public Sector Procurements



Number of respondents = 64
Average response = 2.6
Average standard error = 0.17

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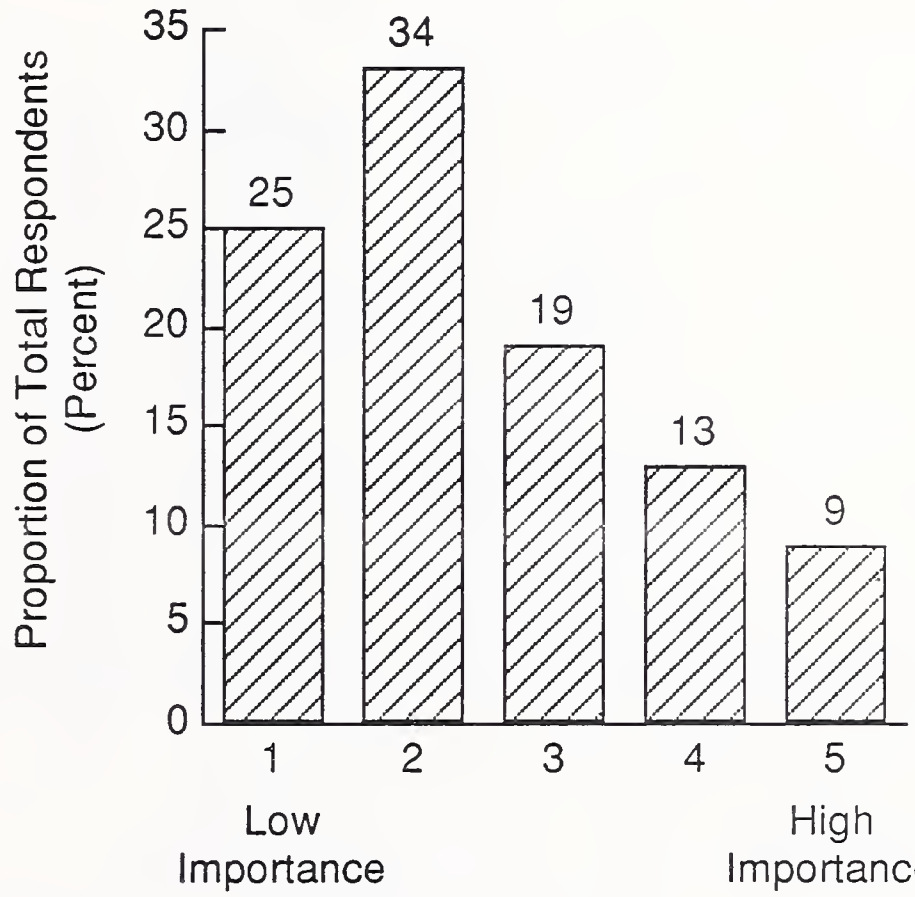
EXHIBIT V-13

Vendor Attitudes towards the Single European Act— Aligning Indirect Taxation (VAT)



Number of respondents = 68
Average response = 2.4
Average standard error = 0.15

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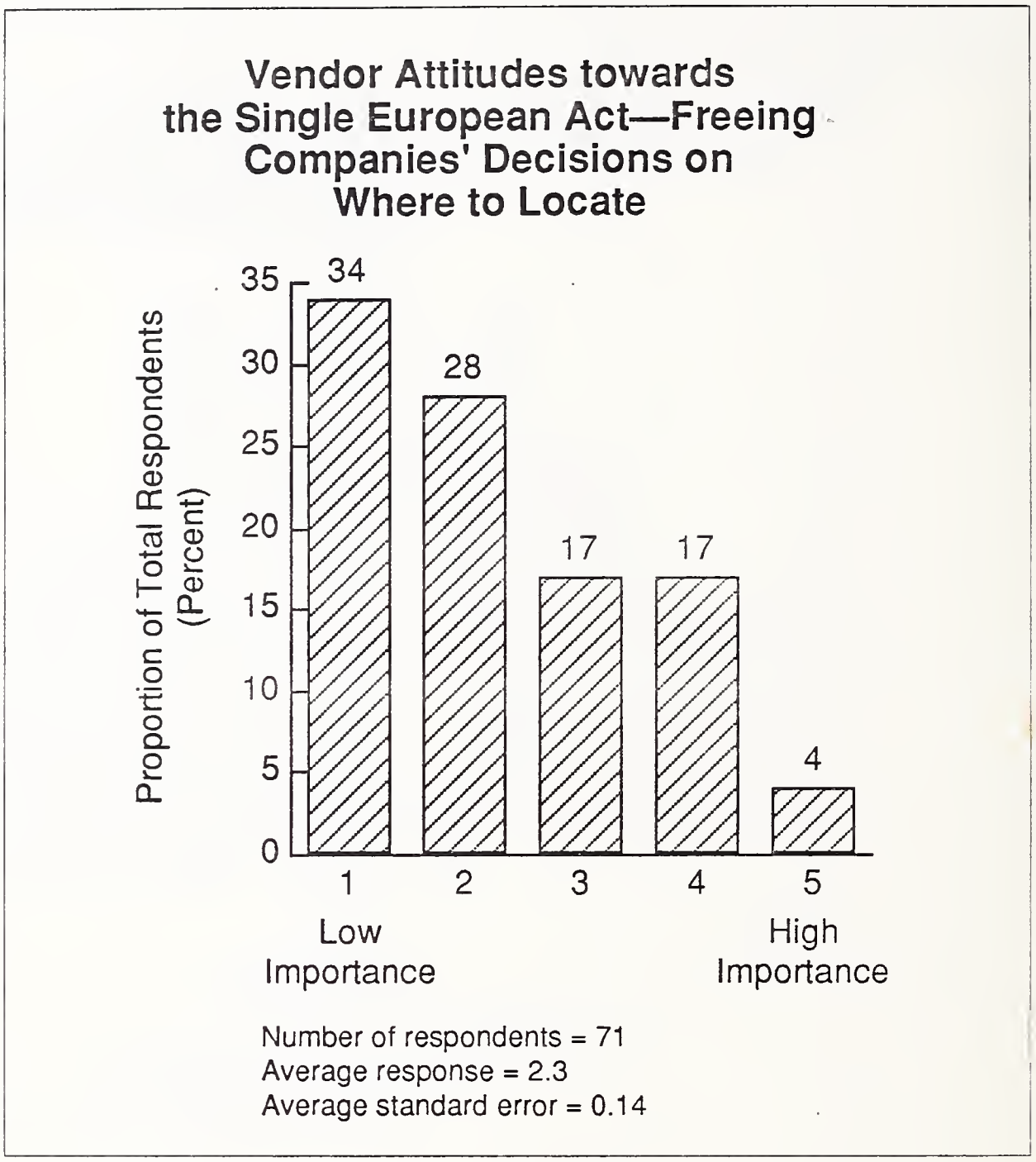
EXHIBIT V-14



The effect of increasing the freedom of where to live, work and set up business was clearly seen by respondents as less important, as Exhibits V-14 to V-16 illustrate. Very few vendors considered this of high importance.

The conclusion that INPUT draws from this in-depth analysis is that, in many areas concerning the impact of the Single European Act, vendors are either confused, or have very individual reactions due to the specific markets that they are in. A good example of this is the area of liberalisation of public procurement.

More open public procurement policies by EEC central and local government bodies will not affect all software and services vendors. Many vendors do not service these markets and so know little of them. However, they are important for the overall software and services industry,

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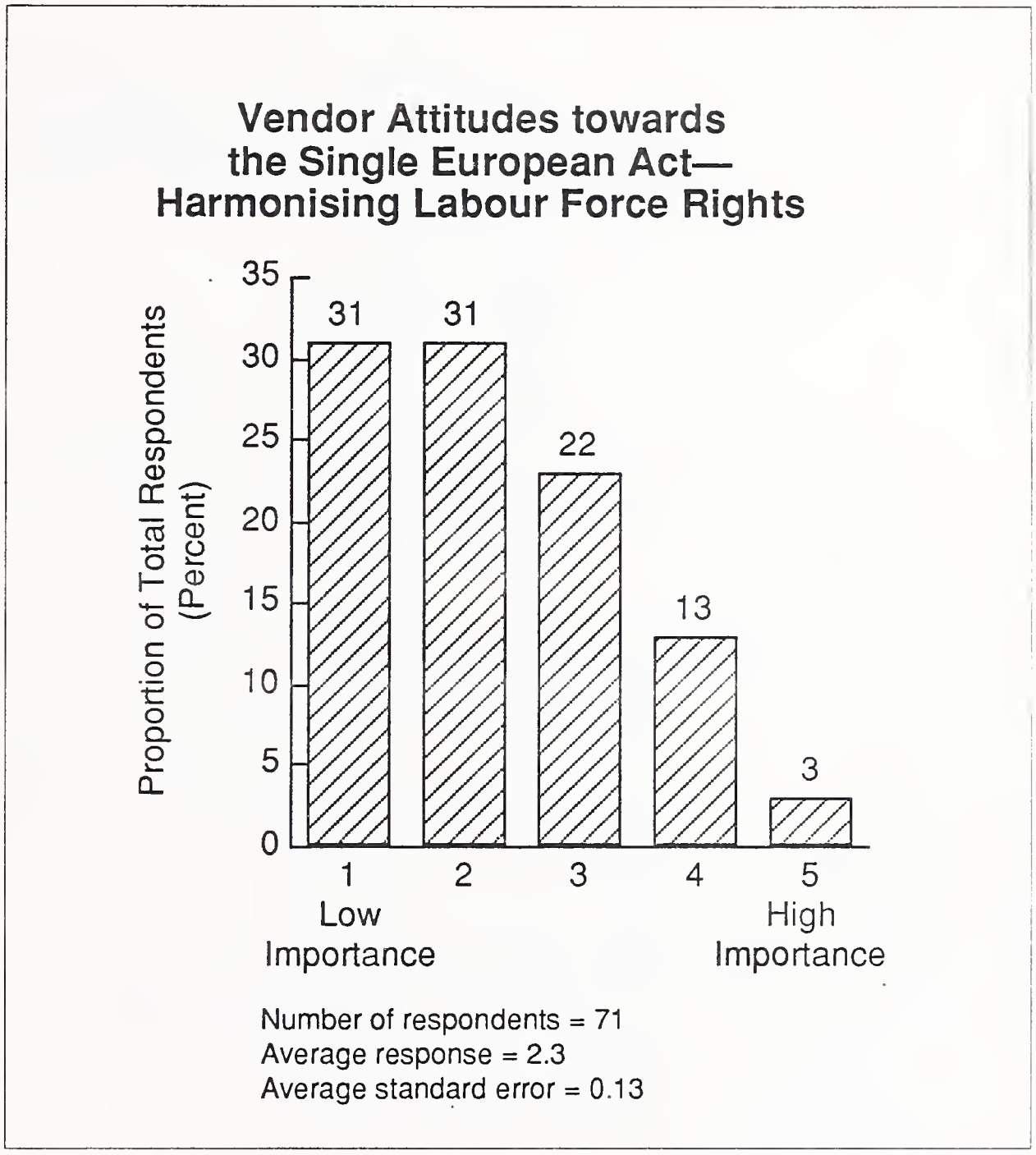
EXHIBIT V-15



representing some 15 percent of the total EEC software and services market. In some member states, this sector is far more important (30 percent in the Netherlands), and in others less important (5 percent in Belgium).

Those vendors who are not directly involved in this sector saw little interest in it and little impact from the Single European Act. However, for the few vendors interviewed by INPUT that were involved in the government sector, there was tremendous enthusiasm for the Single European Act and its very positive effects on demand for their services. Professional services companies were benefiting from working with the European Commission and their sponsored programmes; systems integration vendors saw bigger and more lucrative pan-European contracts; and network service vendors were developing new electronic information services.

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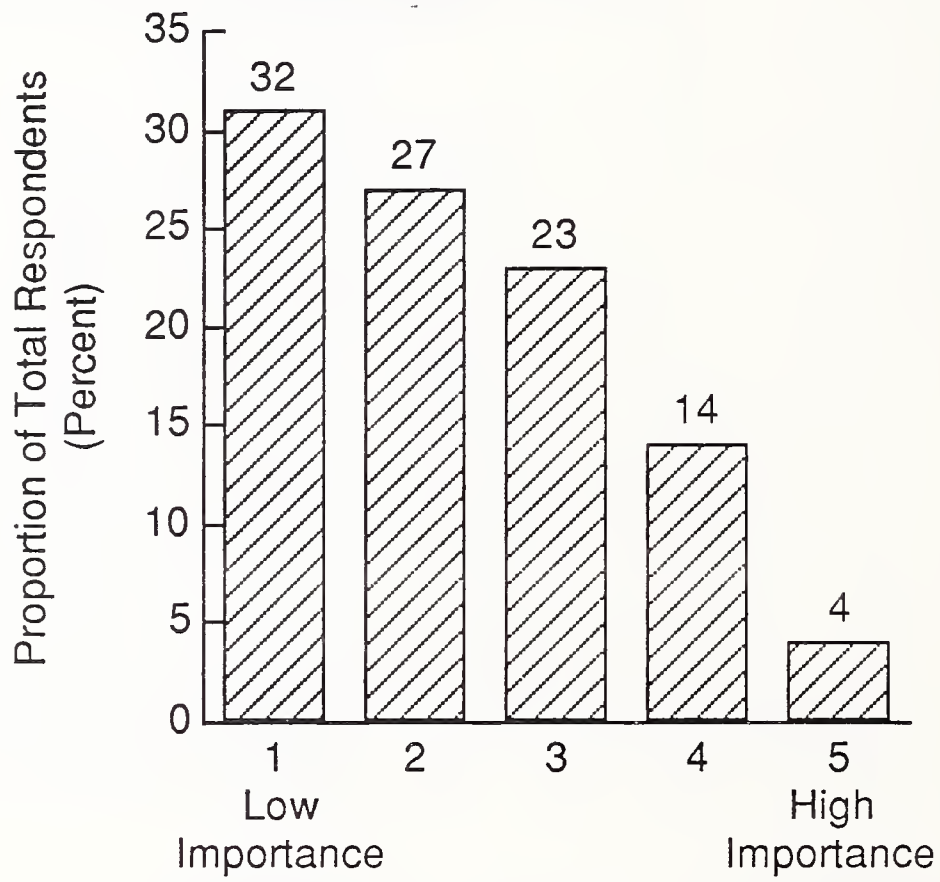
EXHIBIT V-16

Vendor Attitudes towards the Single European Act—Allowing Wider Recognition of the Qualifications of Individuals



Number of respondents = 70
Average response = 2.3
Average standard error = 0.14

What is clear from this research is that the impact of the Single European Act on individual business enterprises is very specific to them and their current environment. Perception of this impact varies from company to company. Care should therefore be taken in making too many generalisations about the effect of the Single European Act on software and services vendors.

To see if clear trends can be identified for major vendor groups, the results of this research have been analysed by type and nationality of the various vendors interviewed. From this analysis, the three most important aspects of the Single European Act have been identified for these large groupings. These results are shown in Exhibits V-17 and V-18. Large vendors are defined as having a turnover of more than $10 million, and small is defined as less than $10 million.

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EXHIBIT V-17

Most Important Aspects of the Single European Act by Vendor Type—Vendor Attitudes

Vendor Grouping	Ranking	Aspect of the Single European Act	Rating (1-5)
All Vendors	1	Telecomms. liberalisation	3.4
	2	Removal of technical barriers	3.2
	3 =	Removal of barriers—people	3.0
	3 =	Removal of barriers—fiscal	3.0
	3 =	Larger home market	3.0
Equipment	1	Telecomms. liberalisation	3.7
	2	Removal of technical barriers	3.6
	3	Removal of barriers—goods	3.4
Large Independents	1	Larger home market	3.8
	2	Telecomms. liberalisation	3.1
	3	Removal of technical barriers	3.0
Small Independents	1	Removal of barriers—people	3.4
	2	Telecomms. liberalisation	3.3
	3 =	Removal of technical barriers	3.0
	3 =	Removal of barriers—fiscal	3.0
	3 =	Removal of barriers—goods	3.0

Number of respondents = 70
Average standard error = 0.2

For equipment vendors, the liberalisation of telecommunications was considered the most important factor, for both West German and U.K. vendors. Having a larger "home" market was considered most important for the larger independent vendors, especially in France. For the smaller independent vendors, the free movement of people was most important, whereas for U.S. companies, it was free movement of goods. Italian companies rated the changes to public sector procurement as the most important impact.

This analysis shows a clear difference between these groupings, such as between the Italian and French, and the West German and U.K. groups.

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EXHIBIT V-18

Most Important Aspects of the Single European Act by Vendor Nationality—Vendor Attitudes

Vendor Grouping	Ranking	Aspect of the Single European Act	Rating (1-5)
U.S.	1	Removal of barriers—goods	3.7
	2	Removal of technical barriers	3.5
	3	Telecomms. liberalisation	3.4
	4	Removal of barriers—fiscal	3.3
West Germany	1	Telecomms. liberalisation	3.2
	2 =	Removal of technical barriers	3.1
	2 =	Removal of barriers—goods	3.0
	4	Larger home market	3.0
France	1 =	Larger home market	3.7
	1 =	Removal of technical barriers	3.7
	3	Telecomms. liberalisation	3.6
	4	Removal of barriers—people	3.5
Italy	1	Public sector procurement	3.9
	2	Telecomms. liberalisation	3.7
	3	Alignment of indirect taxation	3.6
	4	Competition policy	3.5
U.K.	1	Telecomms. liberalisation	3.6
	2	Removal of technical barriers	3.3
	3 =	Removal of barriers—people	3.0
	3 =	Competition policy	3.0
	3 =	Larger home market	

Number of respondents = 70
Average standard error = 0.2

The U.S. group was naturally not concerned over the ability of the Single European Act to enlarge home markets. Potential shortages of skilled staff could be identified as a problem, from the responses of the French and U.K. groups, as well as the small independents.

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Removal of barriers to moving goods throughout Europe is of importance to both equipment and U.S. vendors; a significant proportion of equipment vendors interviewed were U.S.-owned. Customer service vendors interviewed saw real benefit from any reductions in customs procedures. Open borders will make it easier and cheaper for them to move staff and spares. This will also reduce administration and delays in servicing clients. These vendors are looking to centralise support of their pan-European client base. The 1990s should allow them to plan their resources and location of spares far more efficiently.

2. Japan, the U.S. and the EFTA

A quick glance through the business press will confirm that the EEC's trading partners are very concerned about the effects of 1992. There are three key trading partners, each of which has a very different relationship with the EEC: Japan, the U.S. and the EFTA. Since the Single European Act seeks to dismantle the trade-restrictive practices of the individual members, it is easy to perceive the current transformation process as simply erecting the same barriers outside an enlarged economic entity.

Much of the impetus behind the Single European Act derives from the failure of Europe to create national champions, and Europe's lack of competitiveness against foreign companies, especially those from the U.S. and Japan. Therefore, what could be more natural for individual member states than to replace the ideal of national champions with that of European champions, through the power of the EEC?

Despite denials of protectionist intentions, and counter-accusations that the U.S. and Japan are both more protectionist than Europe, many remain unconvinced, or at least undecided. Both sides are mustering their diplomats, their lobbies and their arguments. The arguments are, on the one hand, that the rules will be rigged to unfairly favour Europe-based companies, and on the other hand that the U.S. and Japanese companies that are already multinational will have an unfair advantage in any transitional period. Within the EEC, the northern countries tend to favour a totally free market, and the southern countries tend to favour protection.

A great deal probably depends upon whether suspicions are confirmed or otherwise in the current round of GATT in Uruguay. Japanese companies are establishing a presence in at least one EEC member country before 1993, just in case. Japanese companies have tended to be exporters with domestic manufacturing, but this strategy is changing in Europe as well as in the United States. They are establishing plants with a high local content so that they cannot be accused of setting up "screwdriver" plants, by the active EEC anti-dumping measures.

This Japanese policy has generated some acrimonious disputes in the past. The most famous of these disputes have been the French refusal to

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accept Nissan cars manufactured in the U.K. because the local content was less than 70 percent, and the threat to Ricoh photocopiers that are manufactured in the U.S., thus avoiding anti-Japanese dumping penalties. The extent of Japanese investment in Europe is shown in Exhibit V-19.

EXHIBIT V-19

Japanese Investment in Europe

Country	Year to March 1988 ($ Millions)	Year to March 1989 ($ Millions)	Manufacturing Plants
U.K.	2,473	3,956	92
Netherlands	829	2,359	27
Luxembourg	1,764	657	23
France	330	463	85
Switzerland	224	454	4
West Germany	403	409	67
Belgium	70	164	23
Spain	283	161	41
Italy	59	108	24
Ireland	58	42	19

U.S. multinational companies have been operating and manufacturing in Europe for many years. They are therefore less visibly foreign, and in many respects are more used to doing business in different European countries than the European companies themselves. In this case, the logical consequence of a "Fortress Europe" would be to protect already established non-European multinational companies against non-European market entries.

Many of the vendors in our survey were concerned about the United States as a competitor, especially in France. U.S. multinationals have a strong, coherent domestic base, and are used to operating internationally in equipment and horizontal software products.

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The main problem for U.S. vendors stemming from the Single European Act might be for the small- and medium-sized companies that will have to update their European strategies. Equipment vendors must decide whether to stretch their resources to European manufacturing facilities, whether to build up their distribution networks, or whether to just wait and see.

In the area of services, vendors are more concerned about European competitors than the U.S. Services need in-depth local knowledge, and so tend to be the natural territory of European rather than U.S. vendors. In the case of services, the European Commission may be seeking reciprocity agreements with other major trading groups, but this can be complex. In the case of banks for example, a reciprocal agreement to allow U.S. banks to operate throughout the EEC, would give European banks greater freedom to operate in the U.S., and greater freedom than is now available to U.S. domestic banks. Each industry has to examined on a sector-by-sector basis.

EFTA countries have some very important economic and political problems with the Single European Act. Originally, the EFTA was an alternative concept of European customs union, without anything added. Members have progressively defected to the EEC. However, of the six remaining members, most have a political stance of strict neutrality.

The EEC has a clear objective to increase political cooperation with the EFTA and to coordinate foreign policy towards the EFTA. Ireland already has some difficulties with joint statements because of its traditional neutrality, and for countries such as Sweden and Switzerland, the dominance of NATO members in the EEC could present unacceptable differences.

Aspects of the EEC other than free trade, such as the regional development policies, the proposed workers participation in companies, the European passport, and the discussion on monetary union, will all create new problems between the EEC and EFTA states. It is possible that the easing of East-West tensions in Europe will take some of the edge off of these problems, especially in the case of Finland. However, despite heated debate, there is clearly a move towards more than just a customs union with the EEC by the EFTA, and difficult decisions will have to be made.

The EFTA countries and the EEC are very important to each other in terms of trade; each is the other's most important trading partner. In the case of the EFTA, 65 percent of its external exports go to the EEC, which gives it great reason for concern if its EEC competitors are going to have advantages within the EEC. This has worried the multinational companies of the EFTA countries, so much that Volvo of Sweden has even suggested the possibility of detaching itself from its Swedish origins.

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The President of the Commission, Jacques Delors, has asked the EFTA countries to develop a common policy towards the EEC. Although they have agreed in public, the individual members of the EFTA are developing their own policies. Austria, for example, is expected to apply for full membership to the EEC, and since the Austrian economy is linked to Germany, it should not present great difficulties, but it may trigger the collapse of the EFTA

Conventional wisdom suggests that, of the NATO members Norway and Iceland, Norway may not wish to risk a repeat of the referendum that went against EEC membership. Iceland will probably want to stay out of the EEC so as to protect the fishing industry. Sweden and Switzerland are too strictly neutral to consider joining, and Finland would require further East-West detente.

Many Swedish and Norwegian companies would like to be in the EEC, and European politics are no longer static. After forty years of relative political stability, changes are taking place very rapidly. The changes taking place in Eastern Europe were inconceivable less than a year ago. The reunification of Germany is now being discussed as a medium-term possibility, as is the entry of Warsaw Pact countries into the EEC. The development of a model is necessary to avoid the "Balkanisation" of Europe, and to provide an opportunity for NATO countries, Warsaw Pact countries and neutral countries to achieve their political and economic aspirations.

C

Reality of a Single European Market

Midnight on December 31, 1992 is not a magical hour at which the EEC will drop all its old traditional barriers built up over centuries. This is understood by most people, although there was some confusion when the Single European Act was initially enacted.

The creation of a single European market will gradually evolve, sector by sector, industry by industry, as specific Single European Act legislation removes old obstacles to an open market one by one. Vendors were asked by INPUT what their attitude was about certain business areas becoming more pan-European. Exhibits V-20, V-21 and V-22 illustrate the results of this research.

Three areas were investigated:

- the opening up of national markets
- developing pan-European products/services
- other business areas (such as finance, mergers & acquisitions)

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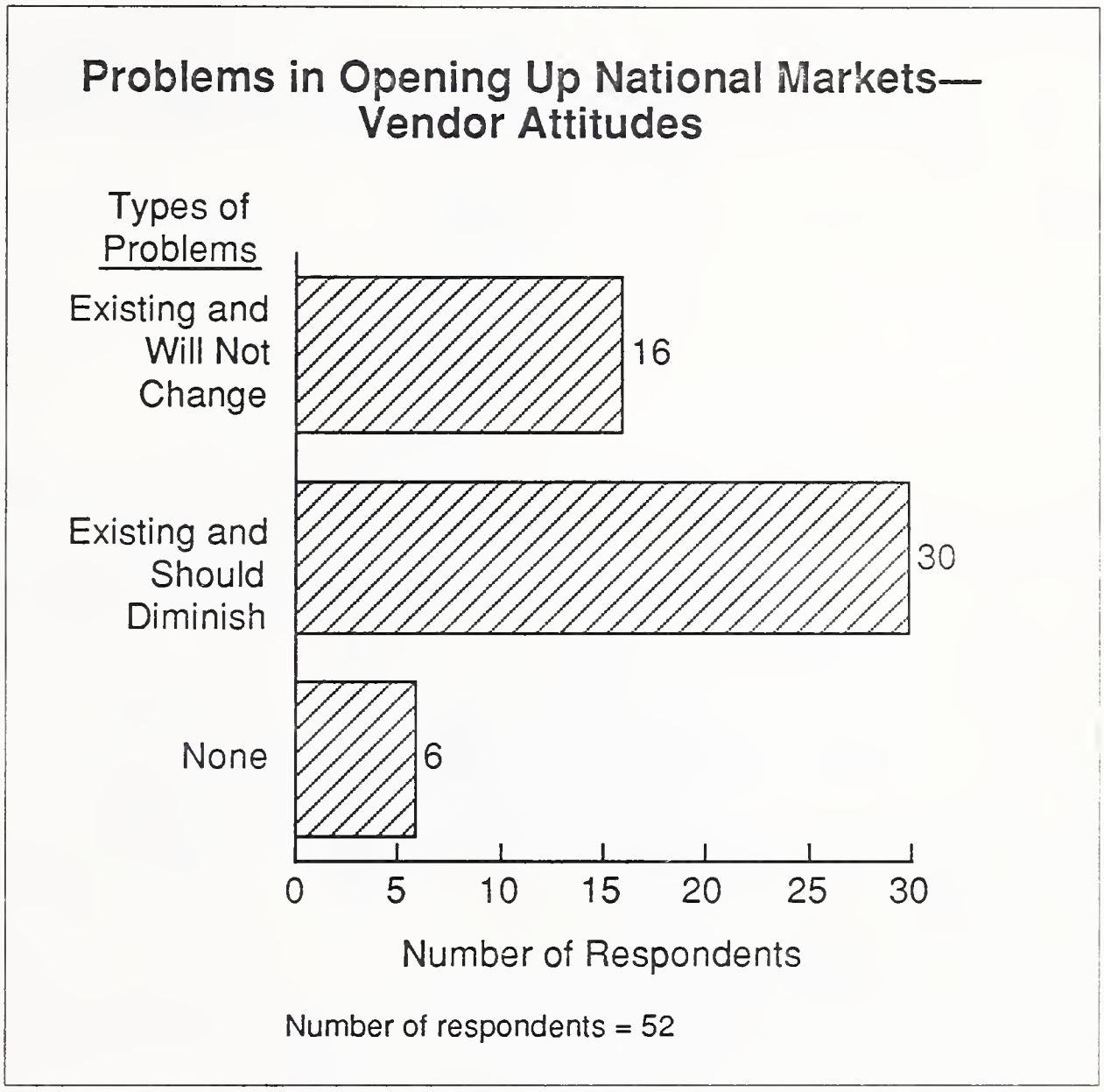
EXHIBIT V-20



In all three areas, vendors saw relatively few problems that would not change—only some 10 percent of responses. Some 60 percent of all responses saw that there are existing problems, but with the Single European Act, these would diminish, whilst some 30 percent of responses stated that there were no problems at all in these areas. The areas in which vendors saw that there would be more potential problems that would not go away, was in areas of business such as finance.

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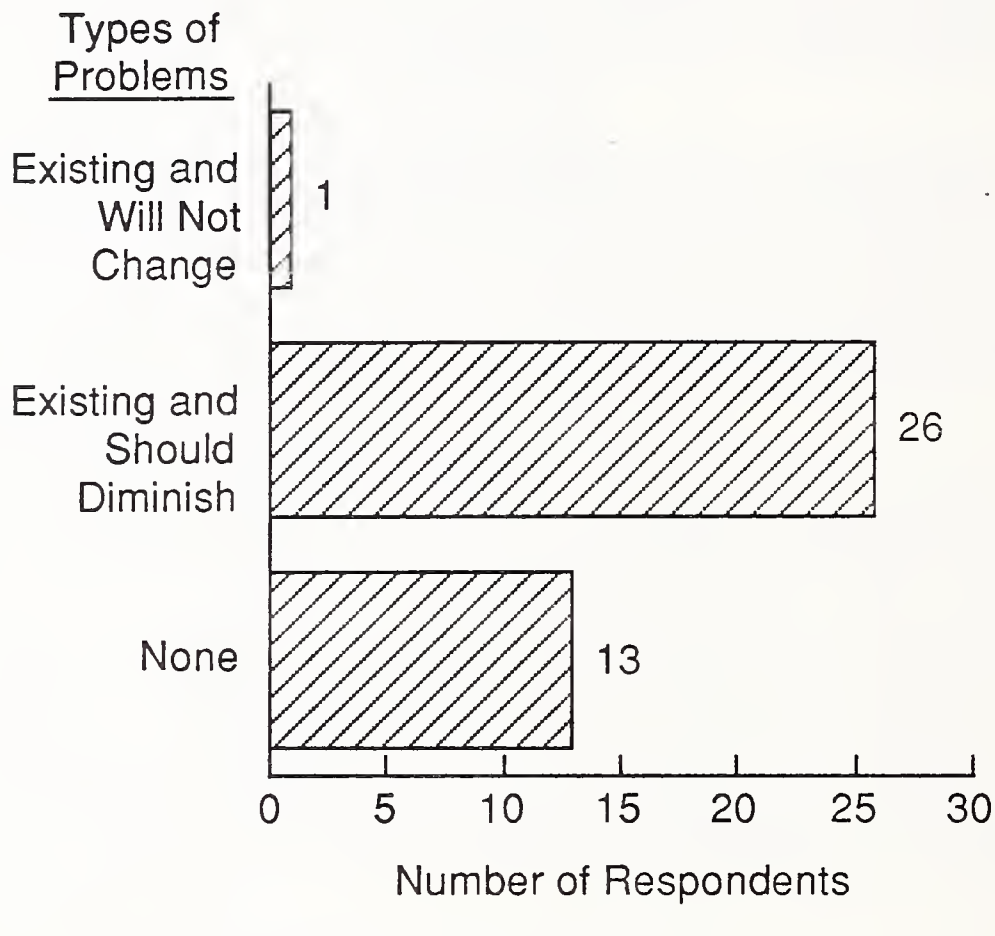
EXHIBIT V-21

Problems in Developing Pan-European Products/Services—Vendor Attitudes



Number of respondents = 40

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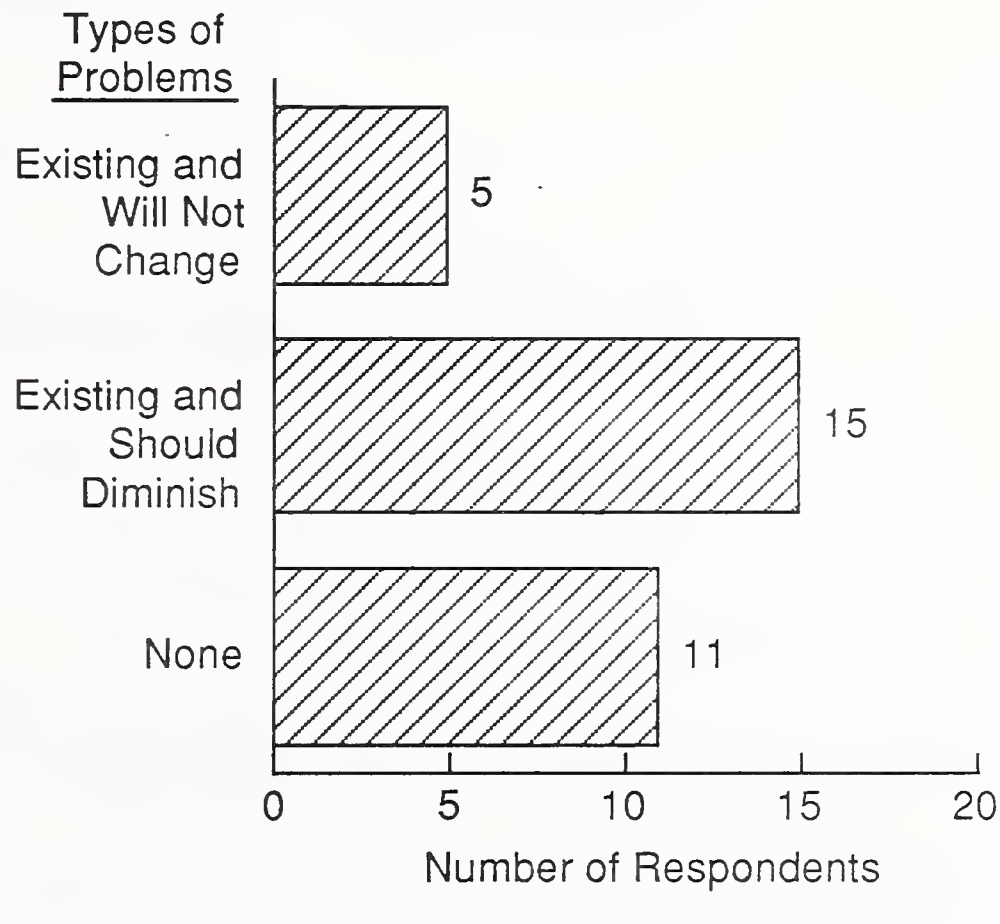
EXHIBIT V-22

Problems in Other Areas of Business—Vendor Attitudes



Number of respondents = 31

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To try to identify what vendors saw as the main factors stopping or slowing down the movement to a single European market, INPUT asked vendors for their attitudes towards ten potential inhibiting factors. Exhibit V-23 and Exhibit V-24 summarise the ranking of these different factors.

EXHIBIT V-23

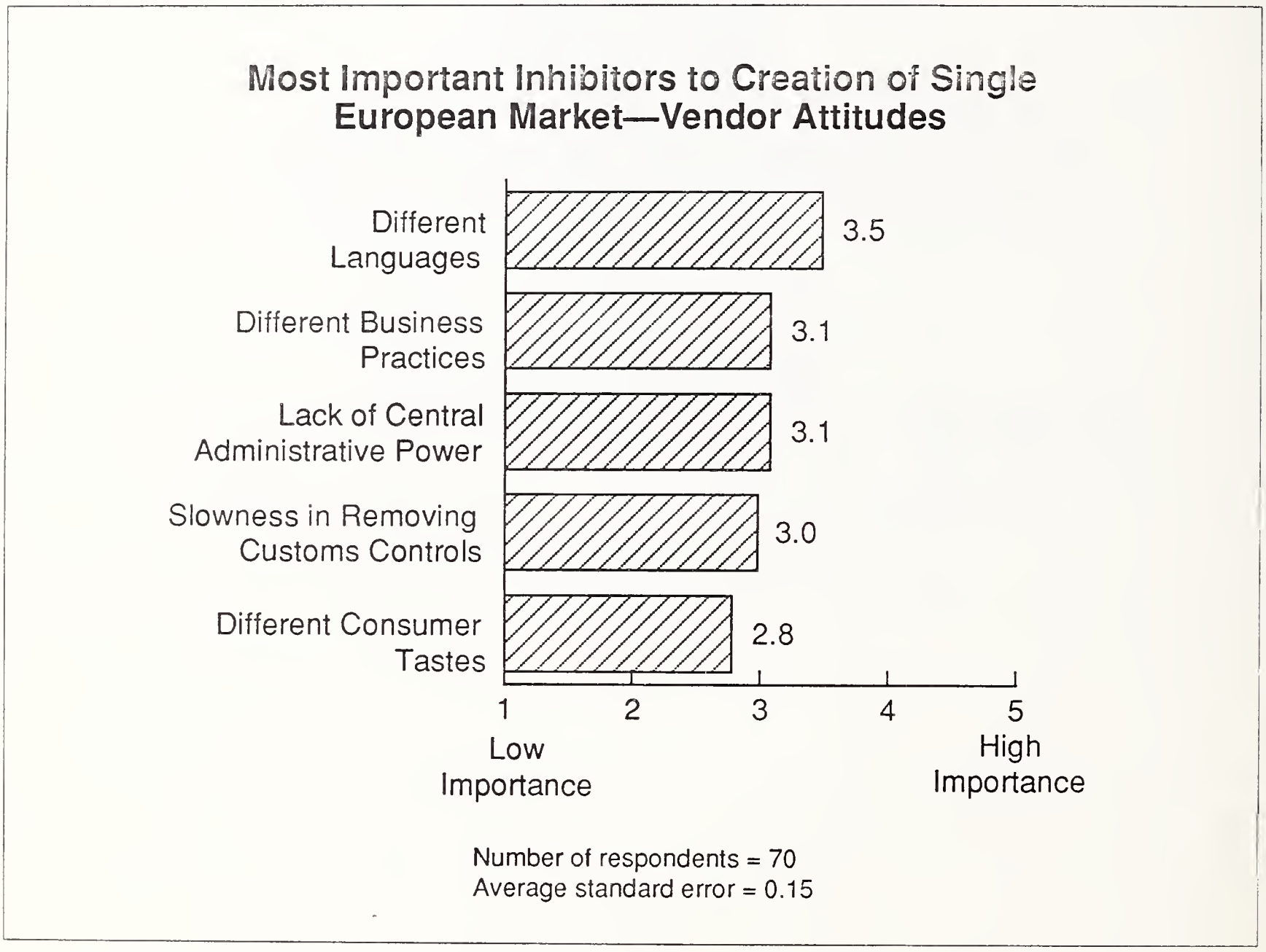

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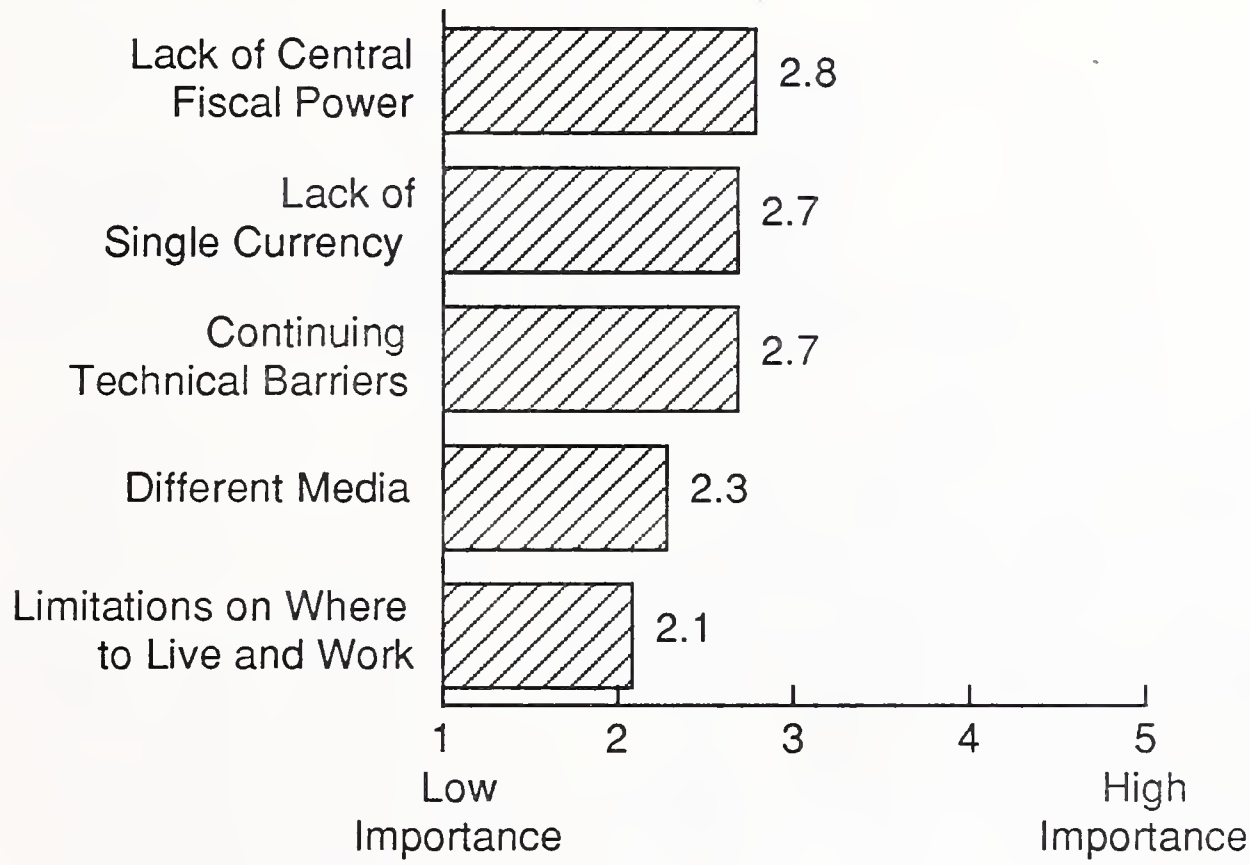
EXHIBIT V-24

Least Important Inhibitors to Creation of Single European Market—Vendor Attitudes



Number of respondents = 70
Average standard error = 0.15

Language was seen as the most important inhibiting factor to the development of a single European market. Differences in business practices, and lack of a strong central administrative power in Brussels were seen as the next most important inhibitors. The least important factors were seen as limitations on where to live and work, and different national media cultures.

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Exhibits V-25 to V-34 show the distribution of the responses to this research in detail. As with other research into vendors' attitudes towards the Single European Act, INPUT found that the responses to some questions showed a lack of consensus. Exhibit V-28, for example, showing vendor attitudes towards the slowness in removing customs controls, showed nearly the same response over all five levels of importance ratings.

EXHIBIT V-25

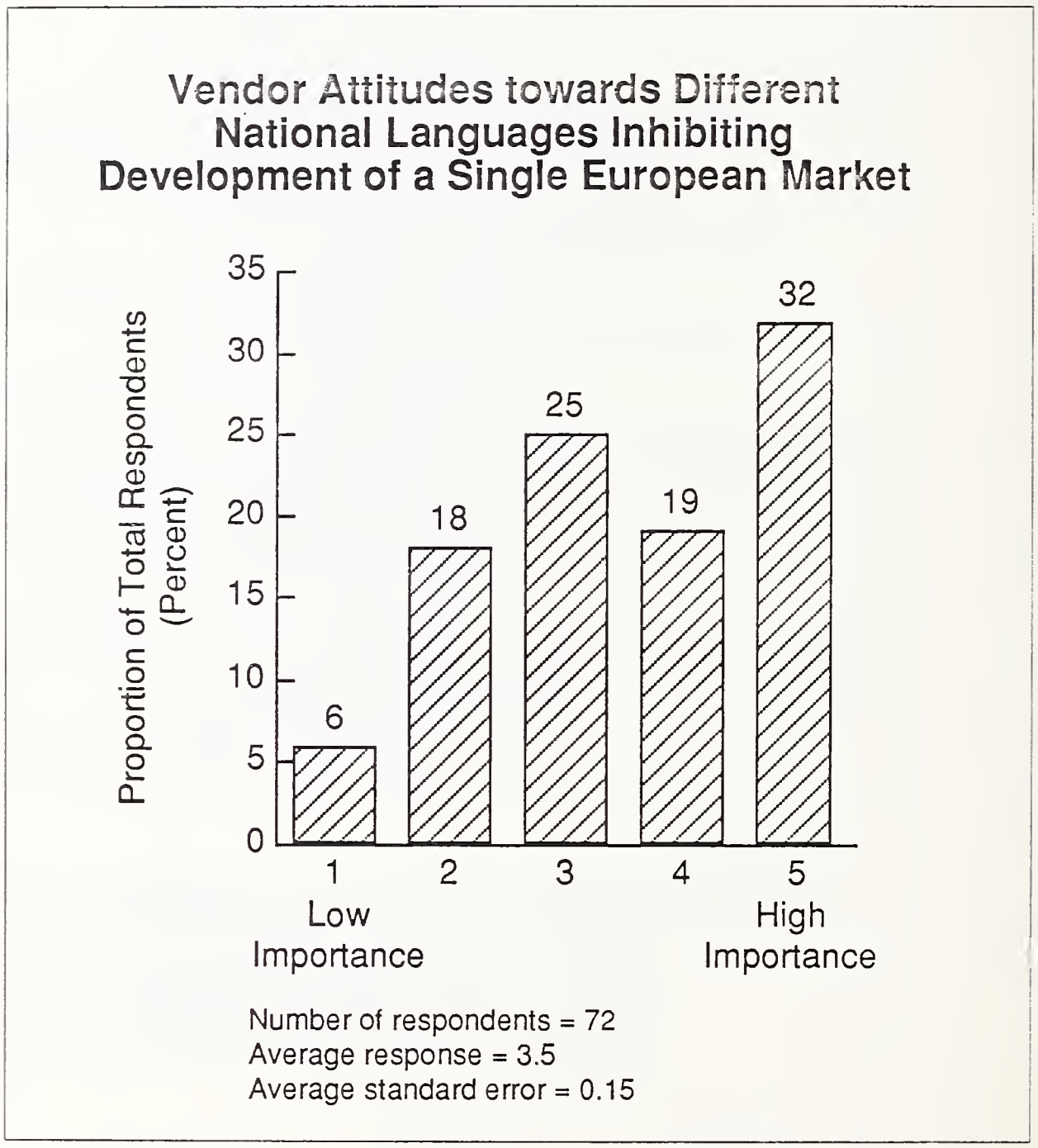

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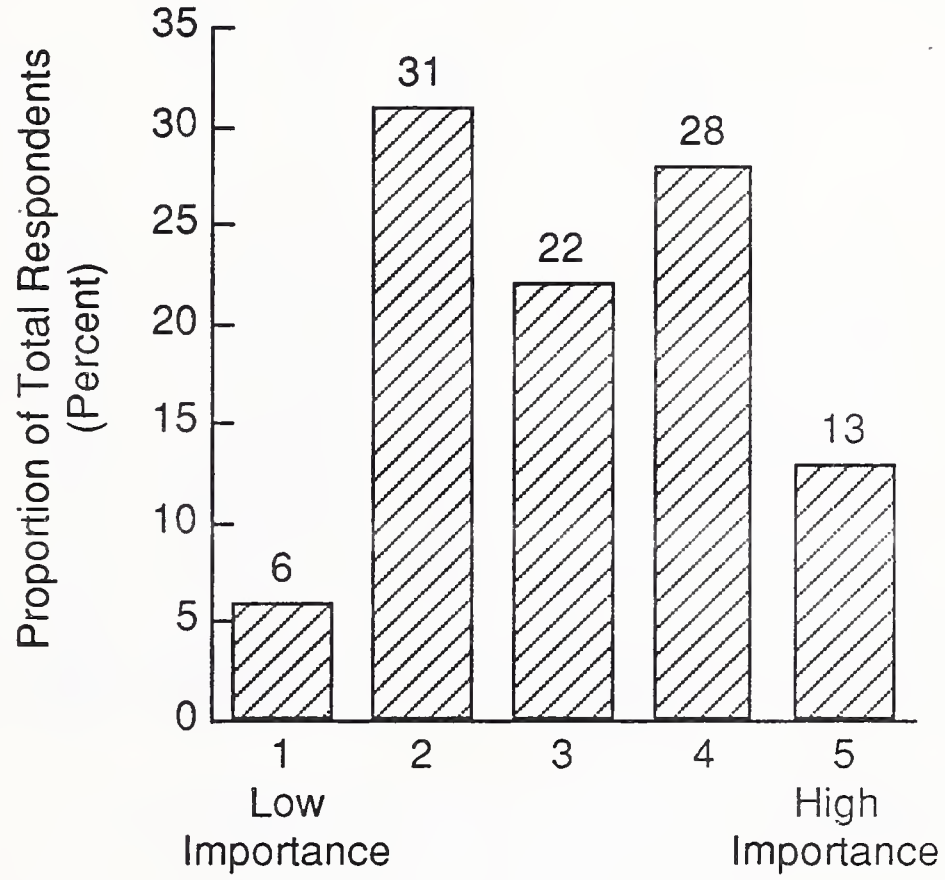
EXHIBIT V-26

Vendor Attitudes towards Different National Business Practices Inhibiting Development of a Single European Market



Number of respondents = 72
Average response = 3.1
Average standard error = 0.13

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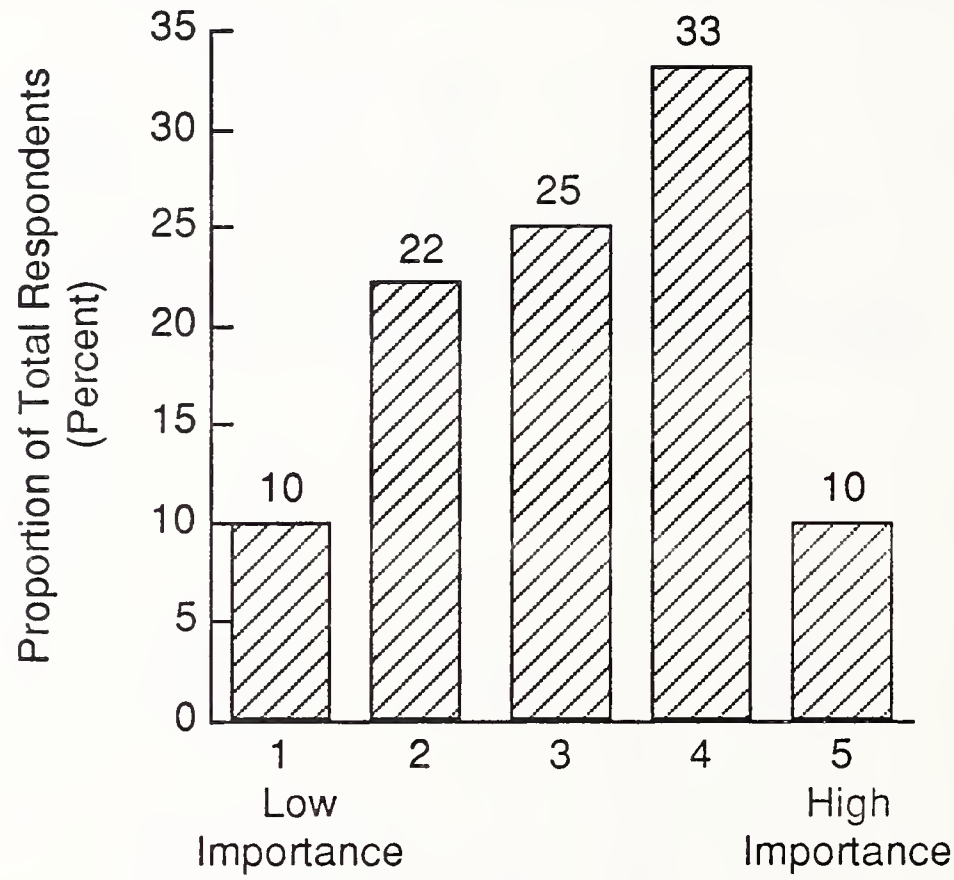
EXHIBIT V-27

Vendor Attitudes towards Lack of Central EEC Administrative Power Inhibiting Development of a Single European Market



Number of respondents = 69
Average response = 3.1
Average standard error = 0.14

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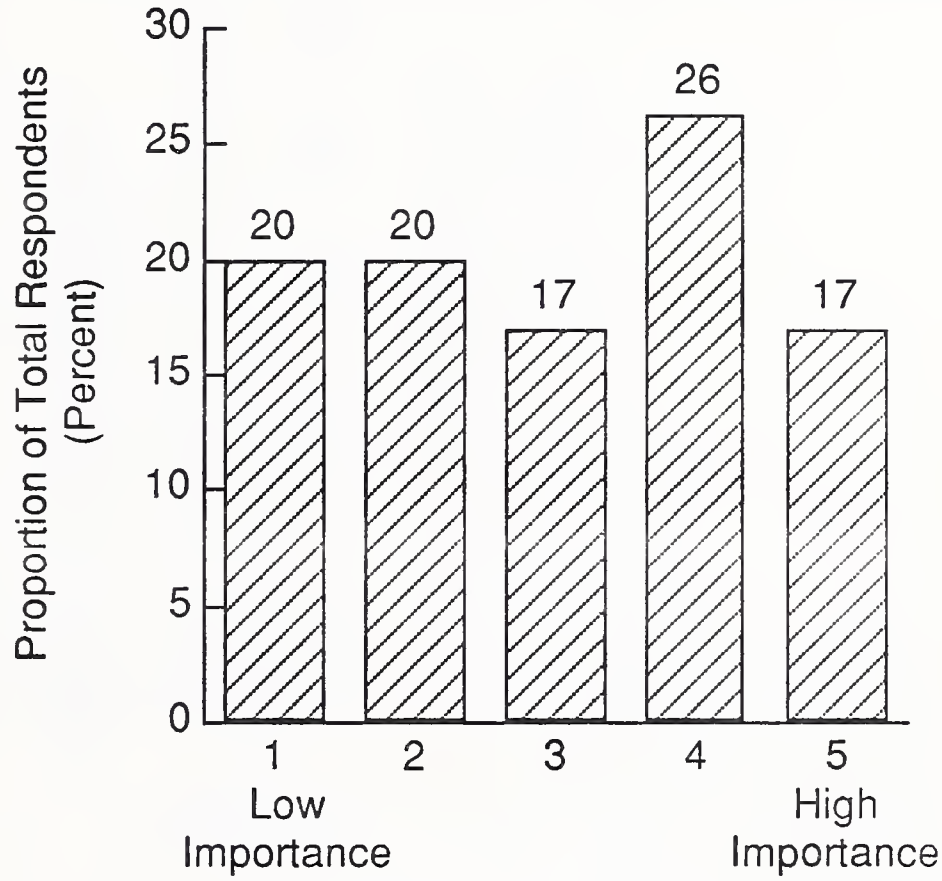
EXHIBIT V-28

Vendor Attitudes towards Slowness in Removing Customs Controls Inhibiting Development of a Single European Market



Number of respondents = 71
Average response = 3.0
Average standard error = 0.16

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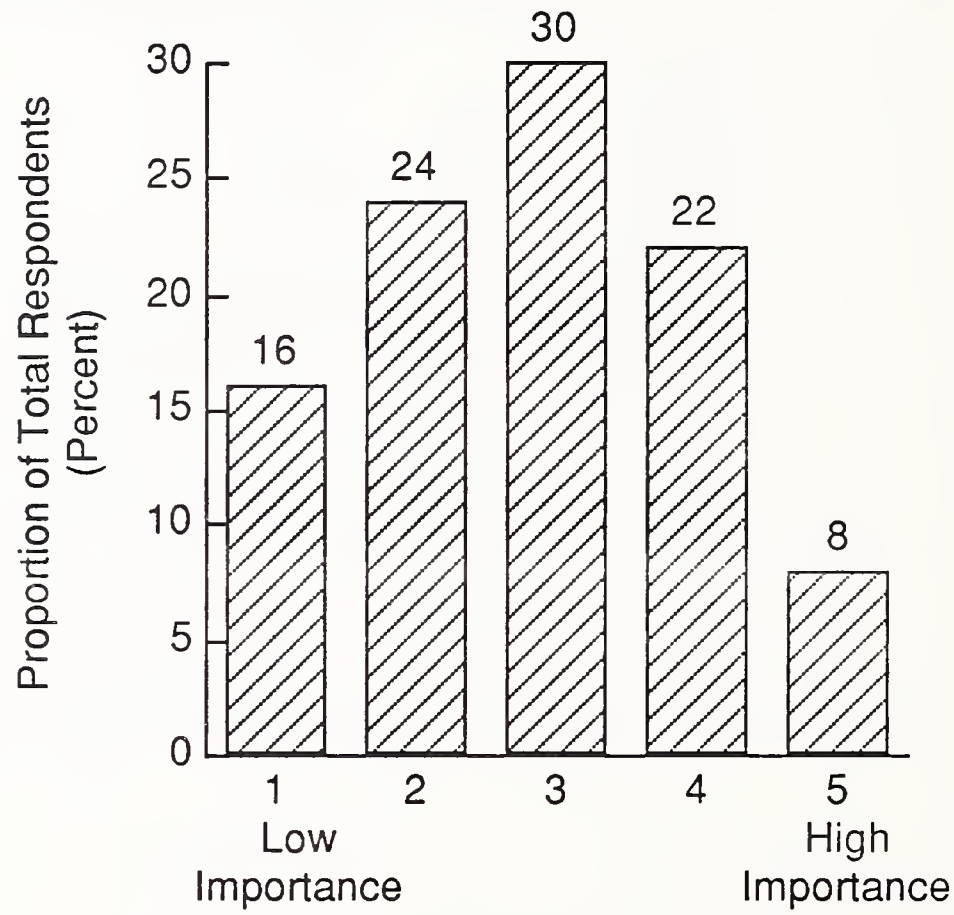
EXHIBIT V-29

Vendor Attitudes towards Different National Consumer Tastes Inhibiting Development of a Single European Market



Number of respondents = 67
Average response = 2.8
Average standard error = 0.14

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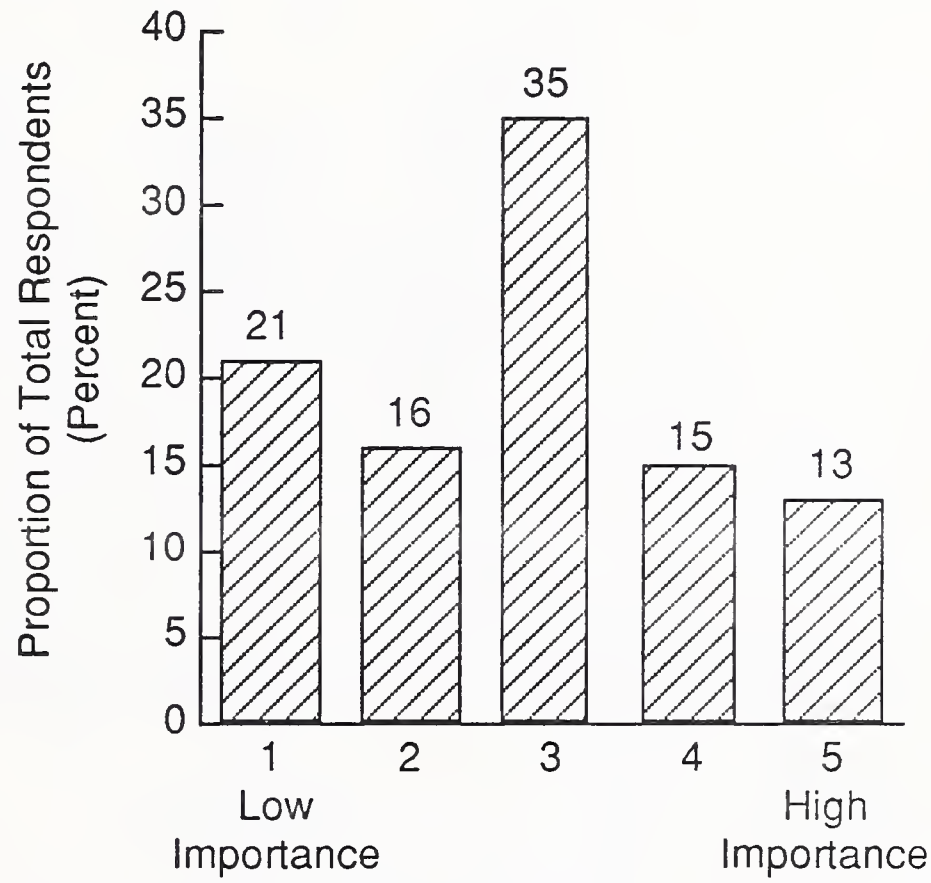
EXHIBIT V-30

Vendor Attitudes towards a Lack of Central EEC Fiscal Power Inhibiting Development of a Single European Market



Number of respondents = 68
Average response = 2.8
Average standard error = 0.15

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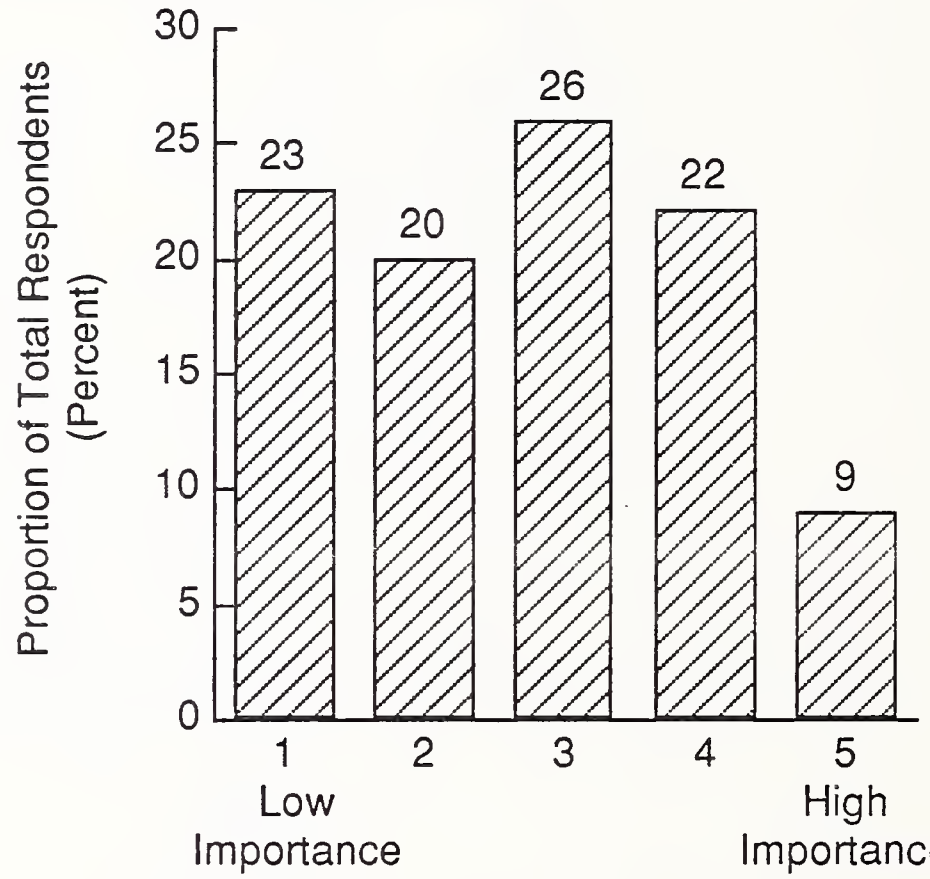
EXHIBIT V-31

Vendor Attitudes towards Lack of a Single EEC Currency Inhibiting Development of a Single European Market



Number of respondents = 69
Average response = 2.7
Average standard error = 0.15

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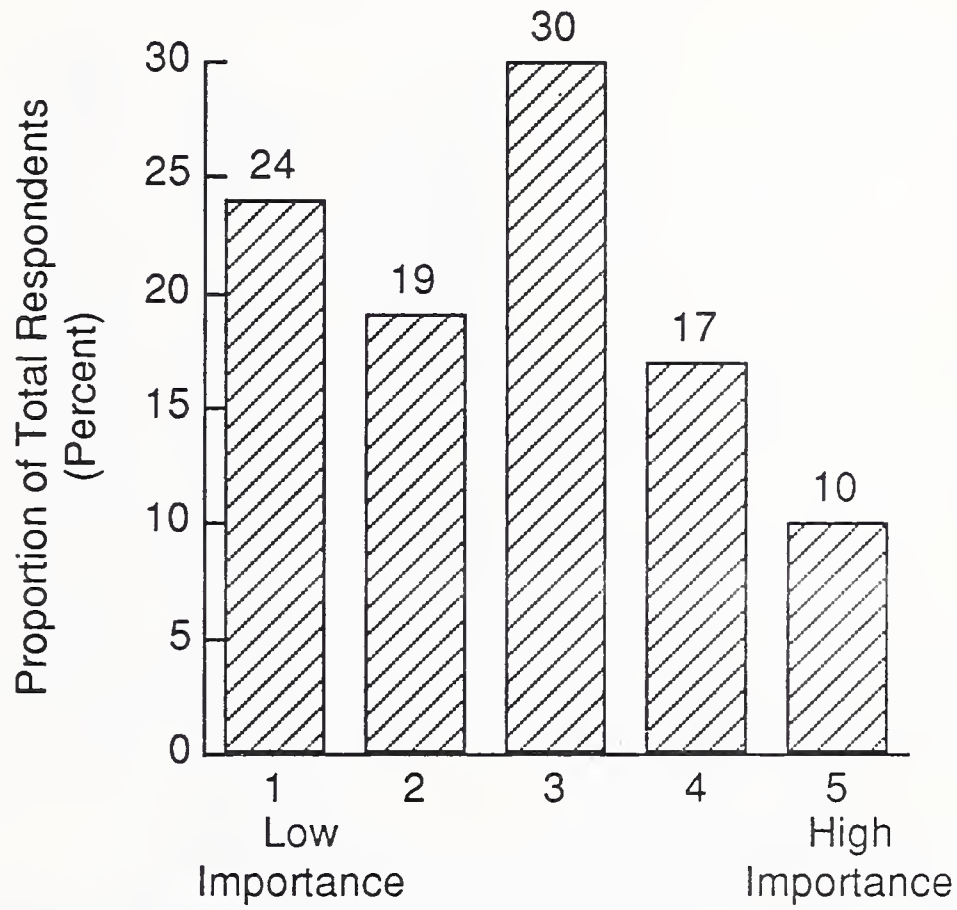
EXHIBIT V-32

Vendor Attitudes towards Continuing Technical Barriers Inhibiting Development of a Single European Market



Number of respondents = 69
Average response = 2.7
Average standard error = 0.15

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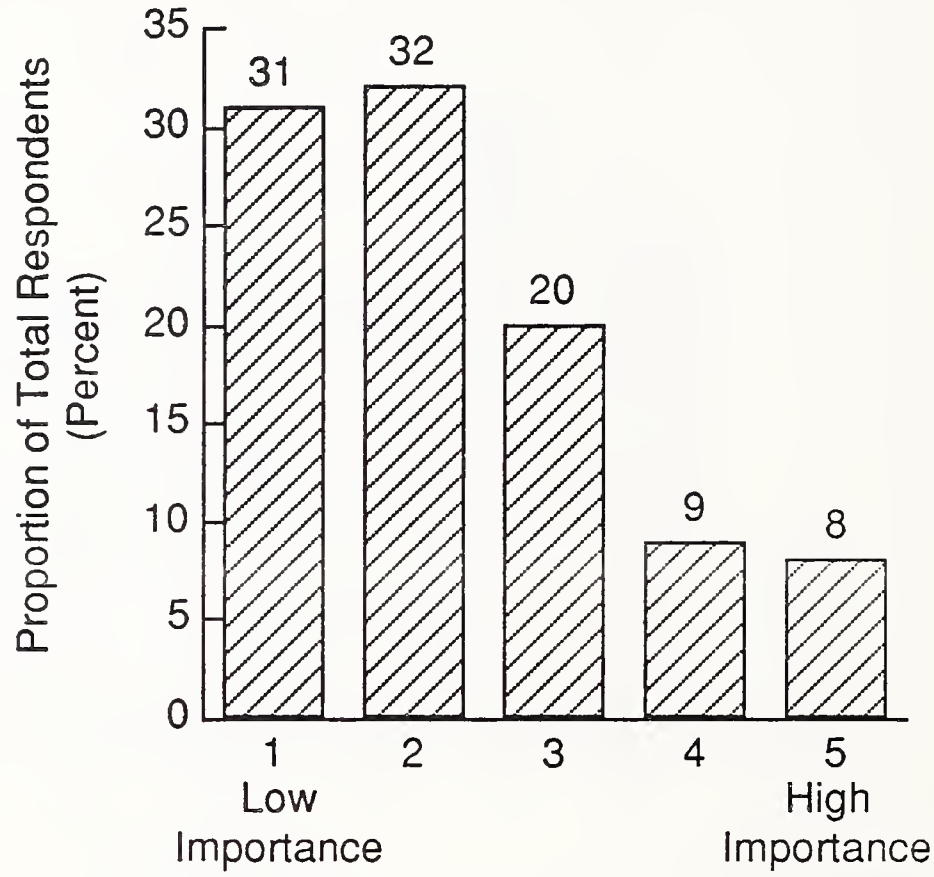
EXHIBIT V-33

Vendor Attitudes towards Different National Media Inhibiting Development of a Single European Market



Number of respondents = 70
Average response = 2.3
Average standard error = 0.14

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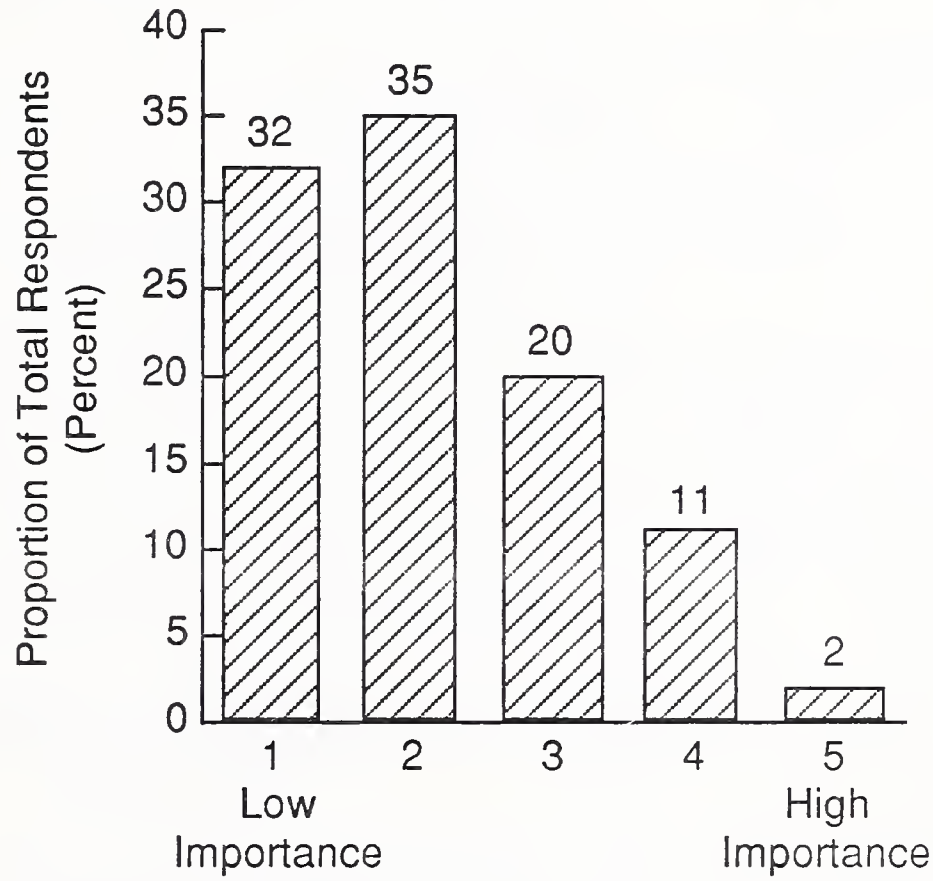
EXHIBIT V-34

Vendor Attitudes towards Freedom of Where to Live and Work Inhibiting Development of a Single European Market



Number of respondents = 65
Average response = 2.1
Average standard error = 0.12

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To try to identify trends amongst specific groups of vendors, this research has been analysed by vendor type and nationality, as is illustrated in Exhibits V-35 and V-36. The only major exception to the overall trend is noted by Italian respondents, who feel that the lack of central political power to enforce the changes is more significant than language.

EXHIBIT V-35

Most Important Market Inhibitors by Vendor Type
Vendor Attitudes

Vendor Grouping	Ranking	Aspect of the Single European Act	Rating (1-5)
All Vendors	1	Different languages	3.5
	2	Different business practises	3.0
	3 =	Lack of central administrative power	2.9
	3 =	Customs controls due to slow harmonisation	2.9
Equipment	1	Different languages	3.7
	2	Different business practices	3.2
	3 =	Lack of central administrative power	3.0
	3 =	Customs controls due to slow harmonisation	3.0
Independents	1	Different languages	3.3
	2	Different business practises	3.0
	3	Customs controls due to slow harmonisation	2.8

Number of respondents = 80
Average standard error = 0.15

When vendors were asked whether there were sectors of the computer industry in which there were pan-European markets already, 83 percent of vendors agreed that there were. Most of them identified equipment markets, especially mainframes, and system software and utilities as already being pan-European, and to a lesser extent, networks.

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EXHIBIT V-36

Most Important Market Inhibitors by Vendor Nationality—Vendor Attitudes

Vendor Grouping	Ranking	Aspect of the Single European Act	Rating (1-5)
U.S.	1	Different languages	3.8
	2 =	Different business practises	3.0
	2 =	Remaining technical barriers	3.0
	2 =	Customs controls due to slow harmonisation	3.0
West Germany	1	Different business practises	3.7
	2	Different languages	3.5
	3 =	Lack of central administrative power	2.6
	3 =	Different consumer tastes and habits	2.6
France	1	Different languages	3.6
	2	Different business practices	3.4
	3	Different consumer tastes and habits	3.0
Italy	1	Lack of central administrative power	4.0
	2	Customs controls due to slow harmonisation	3.8
	3 =	Lack of central fiscal power	3.7
	3 =	Different languages	3.7
U.K.	1	Different languages	3.5
	2 =	Different business practices	2.9
	2 =	Lack of central administrative power	2.9
	2 =	Remaining technical barriers	2.9

Number of respondents = 80
Average standard error = 0.15

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These markets are only pan-European by virtue of the fact that they are global anyway. The key interest is whether a pan-European market for applications software and services could emerge. Apart from identifying the use of UNIX as an inexorable trend, the importance of UNIX was emphasised because of the policy for open systems that is emerging from European governments. Twenty-three percent of respondents believed that a pan-European market in software and services would emerge within the next 5 years. It was recognized that the move would not be "across the board"; certain industrial sectors, and certain types of software and service would develop faster than others.

D

Opportunities and Threats

In INPUT's survey of 80 vendors, over one hundred benefits of the Single European Act were specified, some of them repeatedly, but with considerable variety. The four most common benefits were ease of finding partners and associates, more market opportunities, increased market size, and an easier operational environment. Only five respondents stated that there would be no benefits.

The most common benefits are summarised in Exhibit V-37, but the results were so varied that an extensive summary of other comments is also included, in Exhibit V-38.

The most common threat was the increased competition, and the fact that the competitors would be bigger. Forty-one percent of the respondents identified increased competition in one form or other as a threat. There was not a consensus, however, on where that competition was from. Some considered that the greatest threat came from other EEC countries, while others were more concerned about the competition from the U.S. and Japan. EFTA countries were not perceived as a threat.

Those vendors in countries where companies tend to be small, such as Denmark and Germany, were concerned about companies from other countries making acquisitions. In Italy, where the state has a significant investment and role in industry, the threat to the client base was identified as a result of the EEC initiative on public procurement. This threat to the customer base from other European companies in their sector was a concern of United Kingdom respondents also. Two of the U.S. multinationals were worried about "Fortress Europe."

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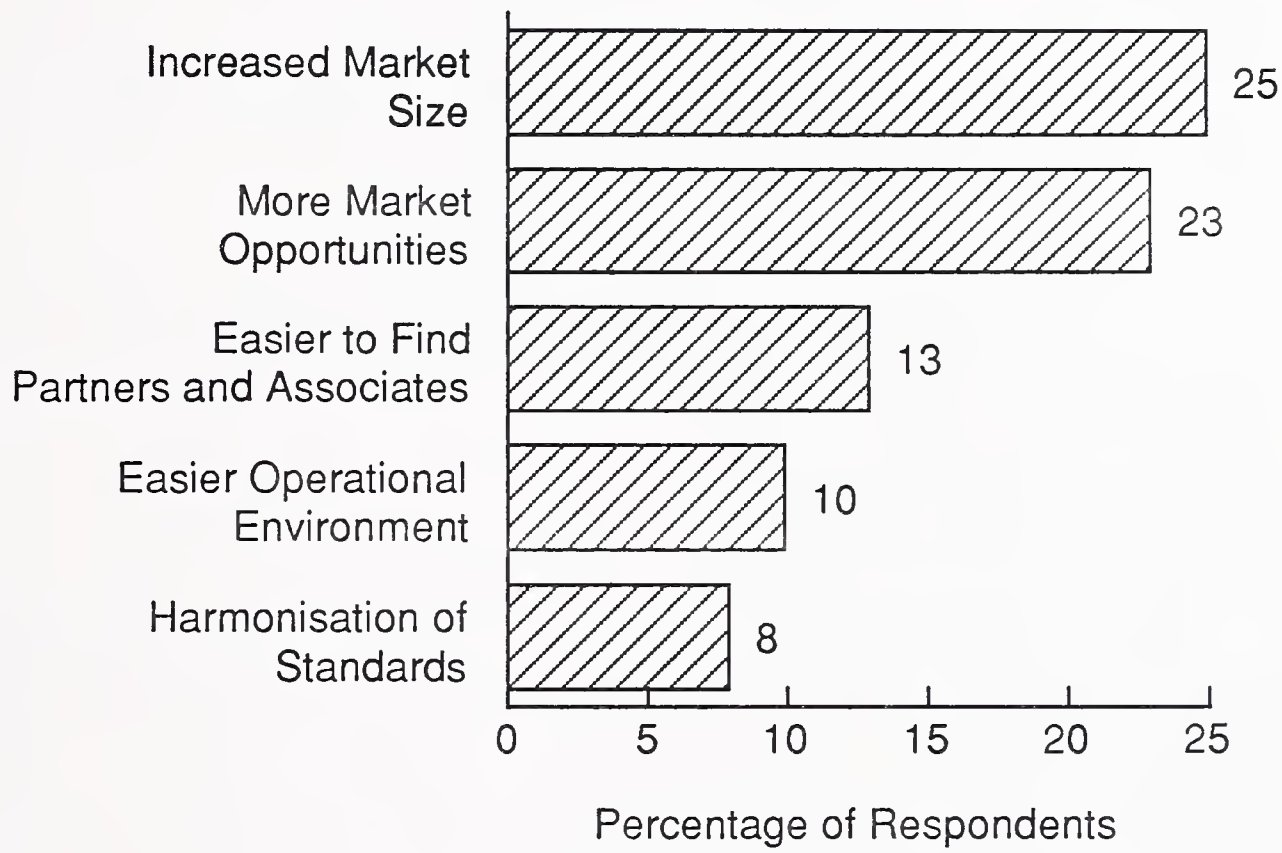
EXHIBIT V-37

Major Benefits of the Single European Act
Vendor Attitudes



Total number of respondents = 80
Average standard error = 1.0

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EXHIBIT V-38

Other Benefits of the Single European Act
Vendor Comments

- Lower costs because of increased competition (Denmark & Spain)
- New clients and services (Denmark)
- EEC funding of activities (Denmark & U.K.)
- Representing non-EEC countries (Denmark)
- Change of attitude and focus of attention (Netherlands)
- Bigger home market (Netherlands)
- Bigger contracts (Netherlands)
- Easier development (France)
- Greater technical richness (France)
- Economies of scale (France)
- Lower distribution costs (France)
- Greater awareness (France)
- Everything (France)
- Faster distribution (France)
- Greater use of tools (Italy)
- Wider services (Italy)
- Risk spread across different economies (U.K.)
- More multinational clients (U.K.)
- Less reason for clients to refuse (U.K.)
- Being European (France)
- More acceptance of standard software (Spain)
- Broader public sector (U.K.)
- More cooperation (U.K. & West Germany)
- More profits (U.K.)
- More profitable client base (U.K.)
- Better quality (West Germany)
- Easier customs (West Germany)
- Greater mobility (West Germany)
- Less bureaucracy (West Germany)
- Competition will enhance productivity (Spain)
- Reduced importation costs (Spain)
- Easier to get staff (Spain)

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The EEC Computer Software and Services Market Structure

VI

The EEC Computer Software and Services Market Structure

The EEC information services market is extremely complex. Each of the 12 different national markets has different cultural characteristics that have often evolved over centuries. Each has different end-user markets with strengths and weaknesses in different vertical industrial sectors. The influence of foreign competition has to be overlayed on top of this domestic picture.

There are two prime groups of foreign competition within the EEC market. There are U.S. vendors that export the products and services to Europe and the EEC vendors that export to other EEC members.

This Chapter discusses the differences between the 12 member states and how these differences influence the domestic software and services markets. It looks at the involvement of foreign competition. It then considers the likely effect of the Single European Act on each national market and on each main delivery mode for software and services.

A Twelve Different Markets

Exhibit VI-1 illustrates the breakdown of the total EEC computer software and services market in 1989. The 12 member states have a combined total market of $44.1 billion in 1989. The difference between these individual national markets is often very marked. As a consequence, today the EEC computer software and services market is far from being a single unified market.

The key differences between the computer software and services markets of individual member states are listed in Exhibit VI-2. In terms of size, France is the biggest single market, accounting for some 27 percent of the total EEC computer software and services market. Luxembourg is the smallest market and is traditionally included with Belgium. The second largest market is West Germany, followed by the U.K. and Italy. In total, the four largest country markets dominate the overall EEC computer software and services market, accounting for some 83 percent of it.

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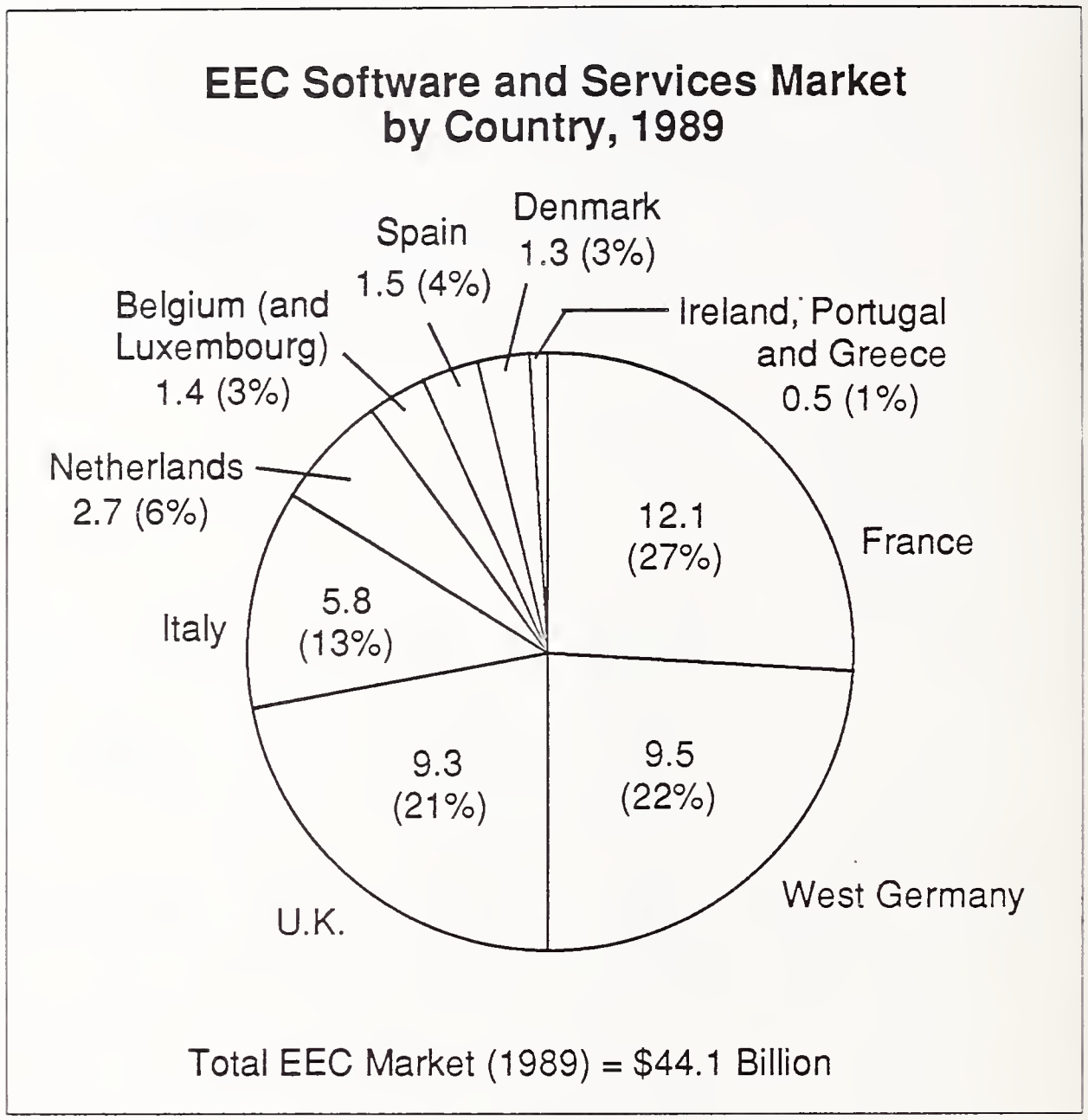
EXHIBIT VI-1



Customer type varies from national market to national market. West Germany has a high concentration of manufacturing and engineering, and so is a big market for CAD/CAM, CIM and distribution applications. The U.K. is strong in banking, finance and insurance. The "Big Bang" in 1986 liberalised the City of London's banking services, and has spawned many major new sophisticated financial trading systems. France's Minitel service has been the most successful European videotex service, and has created a base for hundreds of electronic information service vendors to evolve.

The further south one goes in Europe, the more involved the state and major financial institutions become in the economy. In Spain and Italy, major software and services vendors are owned by the government, directly or indirectly, often working for state organisations. In Spain, ENTEL, the largest Spanish software and services vendor, is owned by Telefonica, which is state-owned. Another major Spanish vendor is ERIA, owned by INISEL Group, the national industrial institute, again

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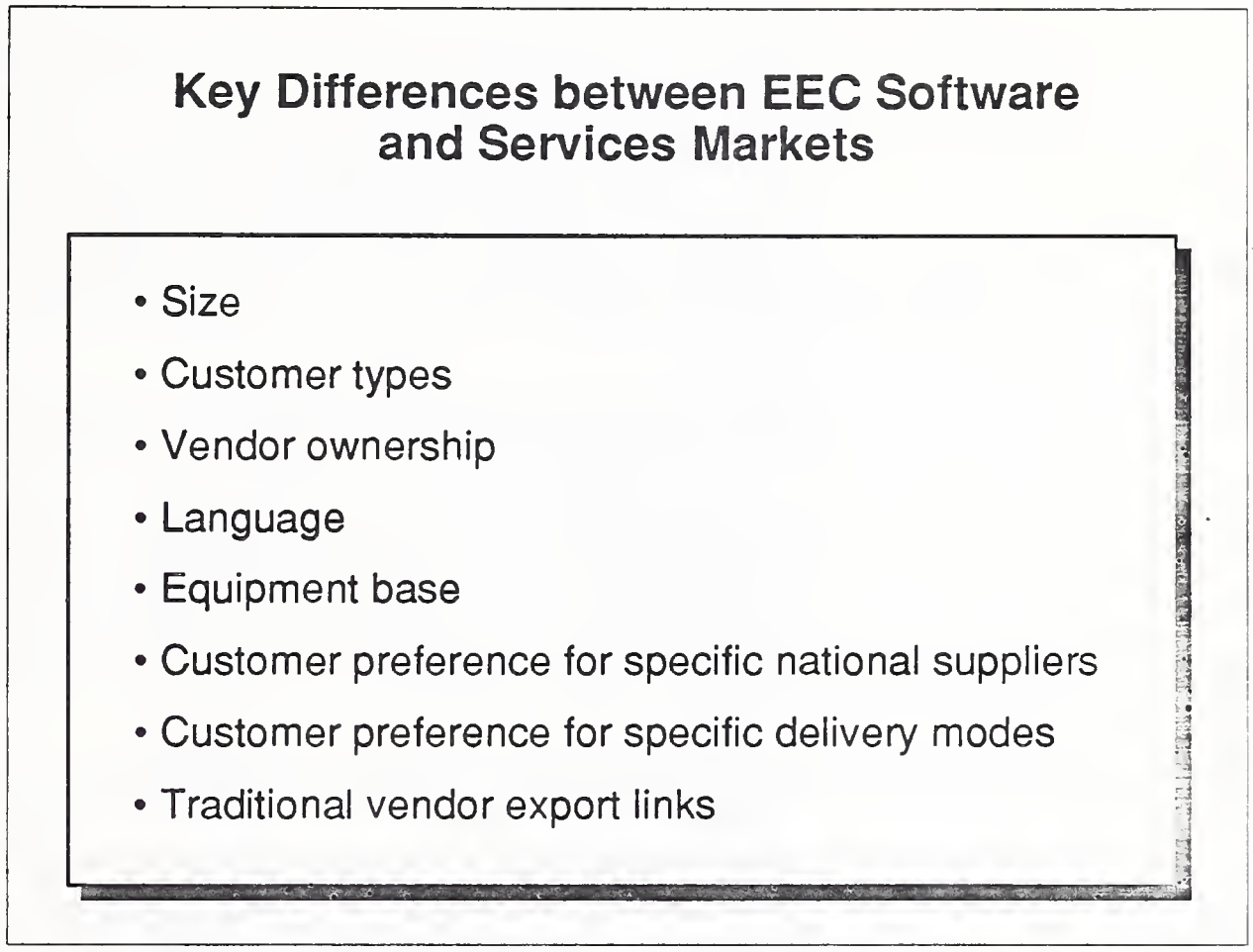
EXHIBIT VI-2



state-owned. In Italy, the largest software and services vendor, Finsiel, is partly owned by the state-owned IRI Group (83%) and partly by the Bank of Italy (17%).

Similarly, in France, major banks like the Bank de Suéz have substantial stakes in many areas of the computer software and services market. The Crédit Lyonnais owns 63 percent of Sligos, the second-largest domestic French software and services vendor. Société Générale, the largest private bank in France, owns SG2, another major French software and services vendor, and Europe Computer Systéms, the computer leasing firm.

A significant number of the larger software and service vendors operating in the EEC are U.S.-owned. The U.K. has historically been a natural first step into Europe for many U.S. companies. Hence, the penetration of U.S. vendors in the U.K. market is higher than in any other EEC market except for Spain, and the very small markets of Portugal and Greece.

Language is perhaps the most obvious factor that is different between the 12 national markets. Ireland and the U.K. have a common business language, English, as do Luxembourg, Belgium and France with French. Out of the 12 member states, there are nine completely different languages used by end-users. Although many vendors speak English, in general their customers do not. To export software across national European boundaries, promotional material, screen formats and documentation all have to be translated, if the vendor wishes success.

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The most successful vendor in the EEC is not European, but U.S., and not an independent, but an equipment vendor. IBM is the leading software and services supplier in every EEC country, except in the Benelux countries and Denmark. Exhibit VI-3 illustrates the leading equipment vendors operating in the EEC by nationality. The total 1988 IS European revenues of the European equipment vendors listed in this exhibit is some $22 billion. This can be compared with IBM on its own, which totaled $20 billion for its 1988 European software and services revenues.

Most European equipment vendors have European IS revenues in the range of $3 to $5 billion per annum. Four U.S. equipment vendors other than IBM—Digital, Unisys, HP and NCR—also have European revenues in this range. The major national differences between these large European and U.S. vendors is that at least 50% of each European vendor's revenue is generated from one European market, its domestic base.

This means that U.S. equipment vendors tend to have a far more even pan-European coverage of European markets than do European equipment vendors. As a result, each European market tends to be a mix of U.S. vendors and national equipment vendors. West Germany has three national vendors; France, the U.K., Italy and the Netherlands have one each. The remaining six member nations have no national equipment vendor, and so tend to be dominated by U.S. vendors, in particular IBM.

The equipment base in each EEC member state is, therefore, very different from that of its neighbours. West Germany is heavily biased towards its domestic suppliers, with three national equipment vendors. In contrast, the U.K. has a very high penetration of U.S. vendors, having only medium-ranking domestic equipment vendors. The net result of this non-homogeneous equipment base across Europe is that it is very difficult for software and services vendors to sell products and services Europe-wide unless they base themselves on U.S. equipment platforms, and in particular those of IBM and Digital.

Different European markets tend to have preferences for different nationalities of vendors. West German end users, for example, have a clear preference for domestic software and services suppliers. An exception to this is in those areas where U.S. technology is recognized as being superior, such as CAD/CAM; then Germans often prefer U.S. products and services.

There are some biases against vendors because of their nationality. A leading French vendor stated to INPUT in the course of the research for this report, that "a team of British experts is likely to be more acceptable throughout Europe than a team of Italians." The reason is not that the

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EXHIBIT VI-3

Major Equipment Vendors in Europe

Nationality	Vendor	1988 European Revenues ($ Thousands)	
U.S.	IBM	19,800	
	Digital	4,900	
	Unisys	2,900	
	Hewlett-Packard	2,330	
	NCR	1,975	
	Apple	930	
	Prime	910	
	Wang	890	
	Control Data	780	
	Compaq	725	
	Commodore	620	
	Amdahl	555	
	McDonnell Douglas	375	
European			
France	Bull	3,660	(FF 24.0 B)
Italy	Olivetti	3,800	(L 5,330 B)
Netherlands	Philips	2,200	(DFl 4.8 B)
Scandinavia	Nokia Data (Finland)	1,130	(FM 4.90 B)
	Norsk Data (Norway)	415	(NK 2.90 B)
U.K.	ICL	1,920	(£ 1,170 B)
	Amstrad	1,010	(£ 0.620 B)
West Germany	Siemens	5,440	(DM 10.5 B)
	Nixdorf	2,580	(DM 4.97 B)
	Mannesmann Kienzle	800	(DM 1.55 B)

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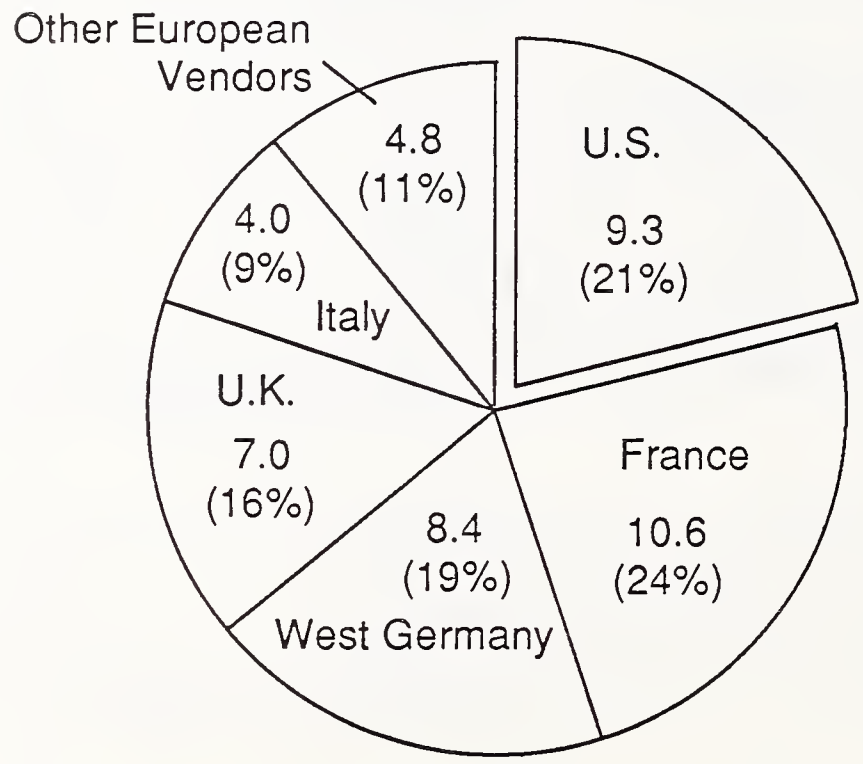
Italians might be any less competent, but the British speak the international business language of Europe—English—and have been exporting their services throughout Europe for longer than the Italians have.

There are also national biases for and against specific delivery modes of products and services. For instance, Italians have a preference for bespoke, as opposed to standard solutions. They dislike the idea that their competitor could have the same system as they have.

The evolution of each national software and services market mirrors that of the overall national economic development. One therefore sees that different EEC vendors have different export preferences, as illustrated in Exhibit VI-4. U.K. vendors have strong links with North America and the Far East, such as Hong Kong and Australasia. The Netherlands also has strong links with the Far East, with Indonesia. West Germany has strong links with the other Germanic areas of Europe—Austria, the majority of Switzerland, and Eastern Europe. Italy has links with North Africa, and Spain with South America.

EXHIBIT VI-4

EEC Software and Services Market by Vendor Nationality, 1989



Total 1989 EEC Market = $44.1 Billion

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The one major European country which looks more to Europe than its neighbours is France. Geographically, France is in the centre of the EEC, and culturally it is very close to the other Mediterranean Latin countries, Italy and Spain. It has strong links with West Germany to the north, and to Belgium because of the language.

The links with Spain are especially strong. Spain has looked to France in many important cultural areas: the Spanish have imported the French education system. French vendors view Spain as a natural extension of their national market. Most major French vendors have either bought into Spanish software and services companies, or set up subsidiaries in Spain. French vendors have also expanded into Italy, as another neighbour with an information services market ready to be developed. Some French vendors do look beyond Europe, mainly to the former colonies in West and North Africa.

These traditional differences between the 12 national computer software and services markets within the EEC will not disappear in 1992. Many have evolved over centuries. The EEC software and services market is diverse, and will remain so well into the next century.

B

Many Different Vendors

As Exhibit VI-4 illustrates, there are two major national groups of vendors active in the EEC market—European and U.S. In the software and services market, U.S. vendors account for 21 percent of the total $44.9 billion EEC software and services market in 1989. This is a quite significant proportion, considering that it is almost equivalent to the total revenue generated by the leading European vendor nation, France.

The vendors from the four leading EEC industrial nations—France, Italy, U.K. and West Germany—account for around 70 percent of the overall EEC market. Vendors from these four countries, plus those from the U.S., completely dominate the EEC software and services market, accounting for nearly 90 percent of the total market.

1. U.S. and Japanese Vendors

Although the involvement of U.S. vendors in the software and services market is significant, it is by no means as great in the computer equipment market. Exhibit VI-5 illustrates the share of both the software and services market, and the equipment market generated by U.S. vendors (including hardware and peripherals, but excluding data communications equipment). Whereas U.S. vendors account for some 20 percent of the software and services market, they dominate the European equipment market, controlling some 60 percent of it.

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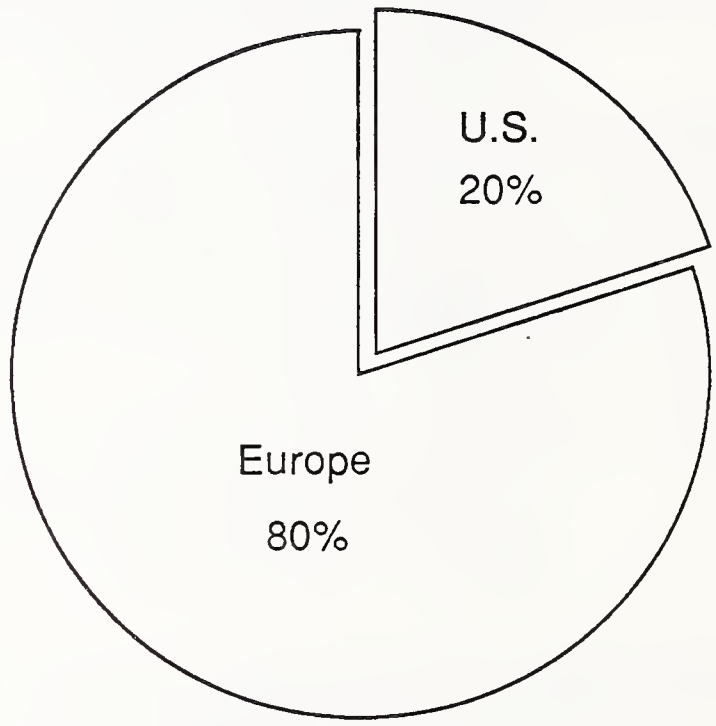
EXHIBIT VI-5

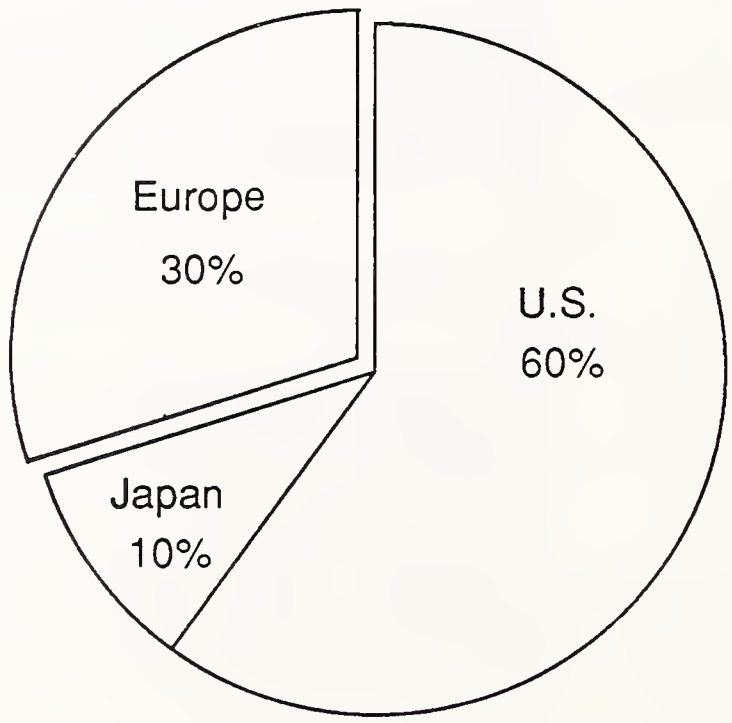
Non-European Vendors in the EEC Computing Market, 1989

Software and Services Market



Total 1989 EEC Software and Services Market = $44 Billion

Computer Equipment Market



Total 1989 EEC Equipment Market = $35 Billion (excluding data communications equipment)

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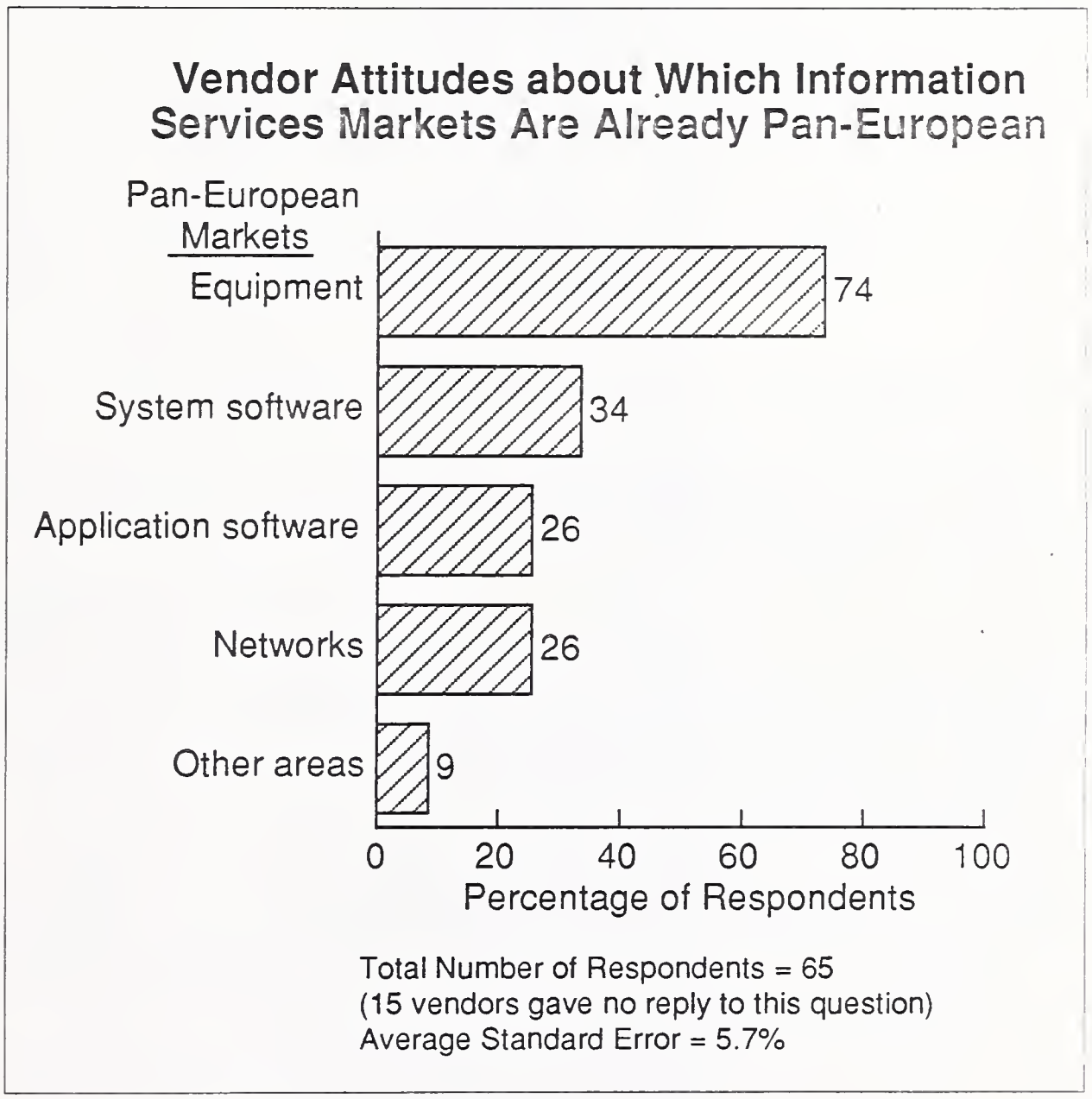
An appreciation of U.S. vendor involvement in these two interrelated IS markets is very important in understanding what might happen to European software and services during the 1990s. The European computer equipment market is one of the few truly pan-European markets today. This opinion was clearly confirmed by INPUT's vendor research for this report, as Exhibit VI-6 illustrates.

EXHIBIT VI-6



If U.S. vendors have managed to dominate one of the first pan-European IS markets, might they also be able to dominate pan-European software and services markets? This question will be particularly important as the Single European Act forces different markets to become pan-European during the 1990s. To try to answer it, it is worth looking at the different software and services markets to see if any can already be classified as pan-European, and if U.S. vendors have begun to dominate them as they have the equipment market.

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One very important software applications market which has been pan-European for a considerable number of years, is CAD/CAM applications. Software for this market has needed relatively little adaptation for different European country environments. Language has generally had to be changed, with the associated screen, documentation and promotional literature translations. However, this was not always the case, as many end users of such applications have been prepared to accept foreign versions, especially if they were English. Other modifications have generally been minor.

As a result, CAD/CAM has been an ideal sector for those vendors seeking pan-European markets. Looking at who are the leading vendors, one finds that U.S. equipment vendors (i.e., Prime, IBM, Intergraph and McDonnell Douglas) dominate this market. Generally they have their own application software and so sell their packages as turnkey systems. In addition, other major U.S. equipment vendors like Digital have also targeted this market, but sell their equipment via VARs who have CAD/CAM software products. Even in the PC market, the leading CAD/CAM vendor is U.S., but is an independent software vendor rather than an equipment vendor. Autodesk with its AutoCAD package is the fastest growing CAD/CAM application for the PC market in Europe, generally sold as a turnkey system.

A similar targeting of other pan-European markets by U.S. equipment vendors can also be seen. Certain sectors of the manufacturing market are already nearly pan-European, so it is not surprising to see U.S. equipment vendors like IBM with its MAAPICS package in this market. Pan-European networks are also dominated by U.S. vendors.

This trend should be of concern to the indigenous European software and services industry. The implications are that as soon as the Single European Act creates a pan-European end-user market, it will be the U.S. equipment vendors that will exploit it successfully, not the Europeans. To counteract this possible trend, European vendors should be stronger in those niche markets which are most likely to be affected by the Single European Act. Europeans should be able to see the opportunities before the U.S. competition does so.

U.S. vendors are likely to target those market sectors in which single products or services can be sold throughout Europe with relatively little local modification. In areas such as professional services, which have a high local content, European vendors should continue to dominate these market sectors.

U.S. vendors already have pan-European mentalities as well as pan-European organisations. They have more of an ability to stand back from the problem and get an overview, rather than be biased towards one specific national market. INPUT fears that it may be European vendors

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who begin to develop the relevant products and services to exploit the new pan-European of the 1990s, but it will be U.S. vendors who will move in and gain the full benefit. This they might do by developing their own competing product or service for these sectors, or by simply acquiring the relevant leading European vendors.

In addition to U.S. equipment vendors who are already deeply involved in the European market, the Europeans should also monitor the Japanese. Currently they have not moved into the European computer market, apart from specific equipment sectors—mainframes and lap-tops. However, as Exhibit VI-5 illustrates, the Japanese already control some 10 percent of the EEC equipment market. With UNIX offering a standard operating system for all ranges of equipment platforms, INPUT sees that it is possible that the Japanese will use UNIX to launch a wide range of standard UNIX equipment platforms, from workstations through minicomputers.

UNIX is becoming a de facto standard in Europe, partly through the work of the European Commission. It would be ironic if it were the Japanese who reaped the major benefit from this development. Because of the move to create a Single European Market, European end users are now pushing the development of UNIX more than the U.S. is. It is therefore likely to be Europe that the Japanese target with any UNIX manufacturing strategy.

Any success by the Japanese would immediately take market share away from both European and U.S. equipment vendors. Equipment vendors are finding that prices and margins are constantly under downward pressure. This trend will continue, and by the early 1990s, software and services will generate more end-user revenues than equipment, and will be more profitable. This is one major reason why all major equipment vendors are looking to move into software and services. If the Japanese were successful in attacking the UNIX equipment market, this success could force equipment vendors to speed up their involvement in the software and services market, or even tempt the Japanese themselves to become involved in this industry.

With U.S. equipment vendors so strong in Europe, any move by them into software and services would dramatically affect European vendor market share. Both European equipment and independent vendors should be very concerned over the possibility of such developments.

2. 30,000 Individual Vendors

To understand the potential impact of the Single European Act on the EEC software and services market, it is necessary to look at the structure of the industry by numbers of vendors and by their typical revenues.

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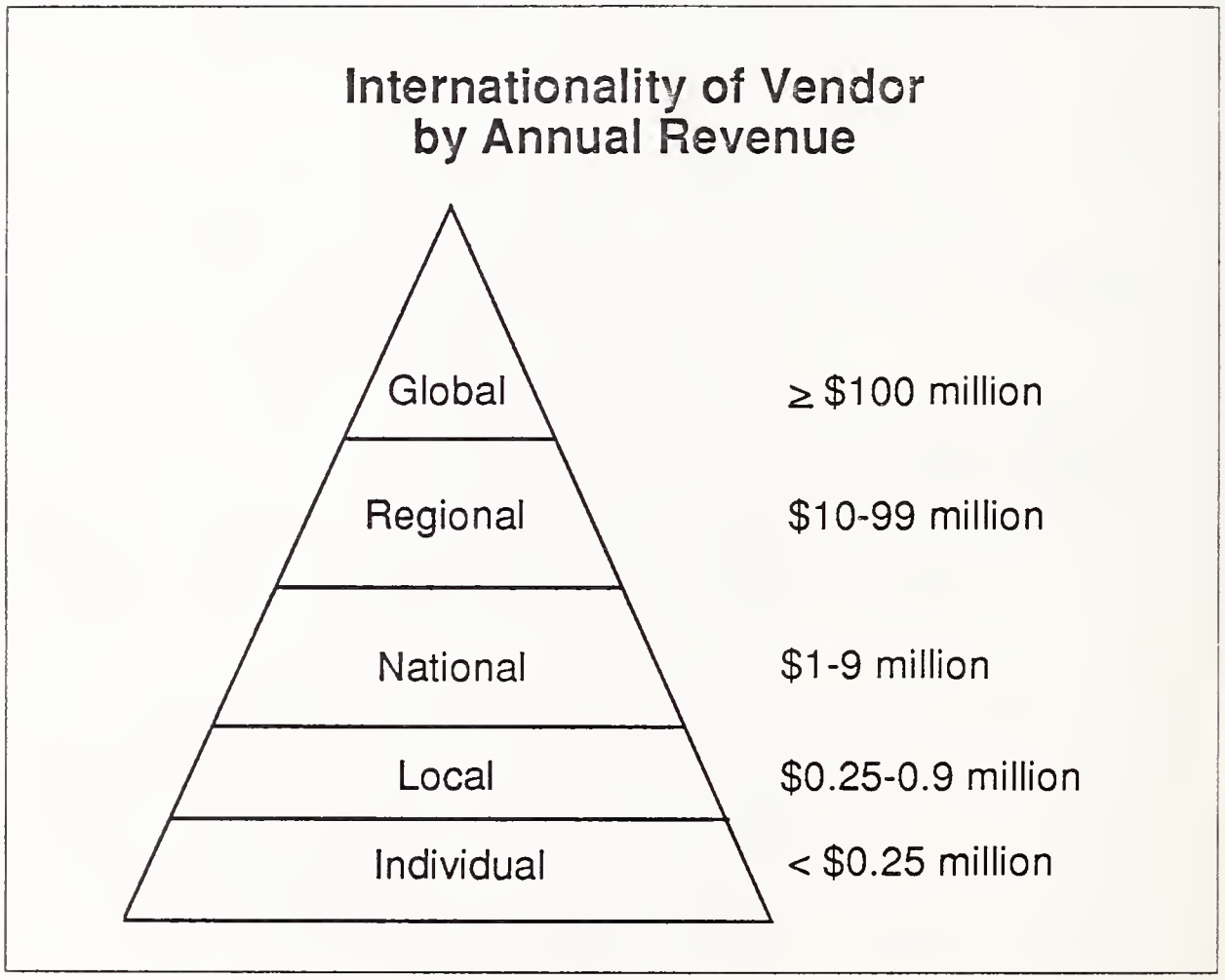
Exhibit VI-7 illustrates how vendors can be categorised by annual revenues. Those with revenues over $100 million per year are generally involved in many different global markets, or aspire to become global. All the major equipment vendors fall into this category. Most of those vendors with revenues between $10 and 100 million are involved in more than one country and concentrate on specific regions. The large French software and services vendors have expanded all over southern Europe; the large German vendors cover the German speaking parts of Europe (West Germany, most of Switzerland, and Austria); whilst U.K. vendors have moved into the various English speaking parts of the world—North America, Australasia and Hong Kong—as well as other major European countries.

EXHIBIT VI-7



Those vendors with revenues in the range of $1 to 10 million per annum are generally nationally based. They may have some exports, but these are limited and generally only to neighbouring countries. Those with revenues under $1 million per year are even more limited in outlook. Generally they serve a very localised customer base and have virtually no exports.

INPUT considers that any vendor with revenues of less than $0.25 million per year is more likely to be a group of individuals rather than a

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fully-fledged company. In defining number of companies, INPUT therefore only counts vendors with revenues of more than $0.25 million.

INPUT estimates that in total there are some 30,000 individual vendors in the EEC software and services market. Exhibit VI-8 illustrates the breakdown of this total by different revenue ranges. Two-thirds are estimated to be vendors with revenues under $0.25 million per annum, and so are classified by INPUT as individuals rather than companies. The total number of companies is therefore estimated at around 10,000.

EXHIBIT VI-8

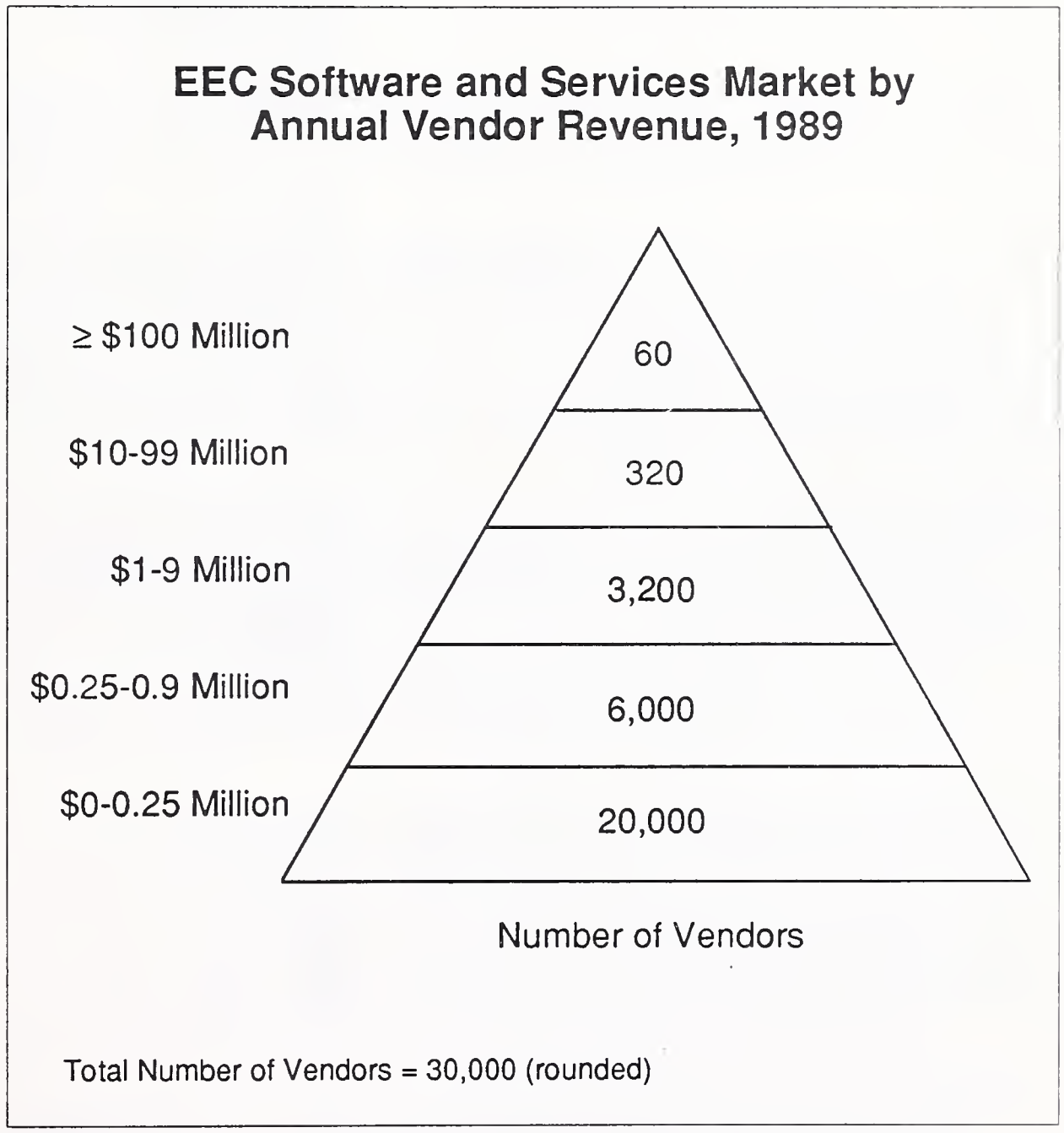

Exhibit VI-9 breaks down the total 1989 EEC market of $44.1 billion into the major nationalities of vendors, by the same revenue ranges. U.S. vendors dominate the highest revenue range. As Exhibit VI-8 indicated, there are only 60 vendors in this revenue range, and of these, some 14 are U.S., accounting for about 40 percent of the total revenue generated by EEC vendors in this revenue range.

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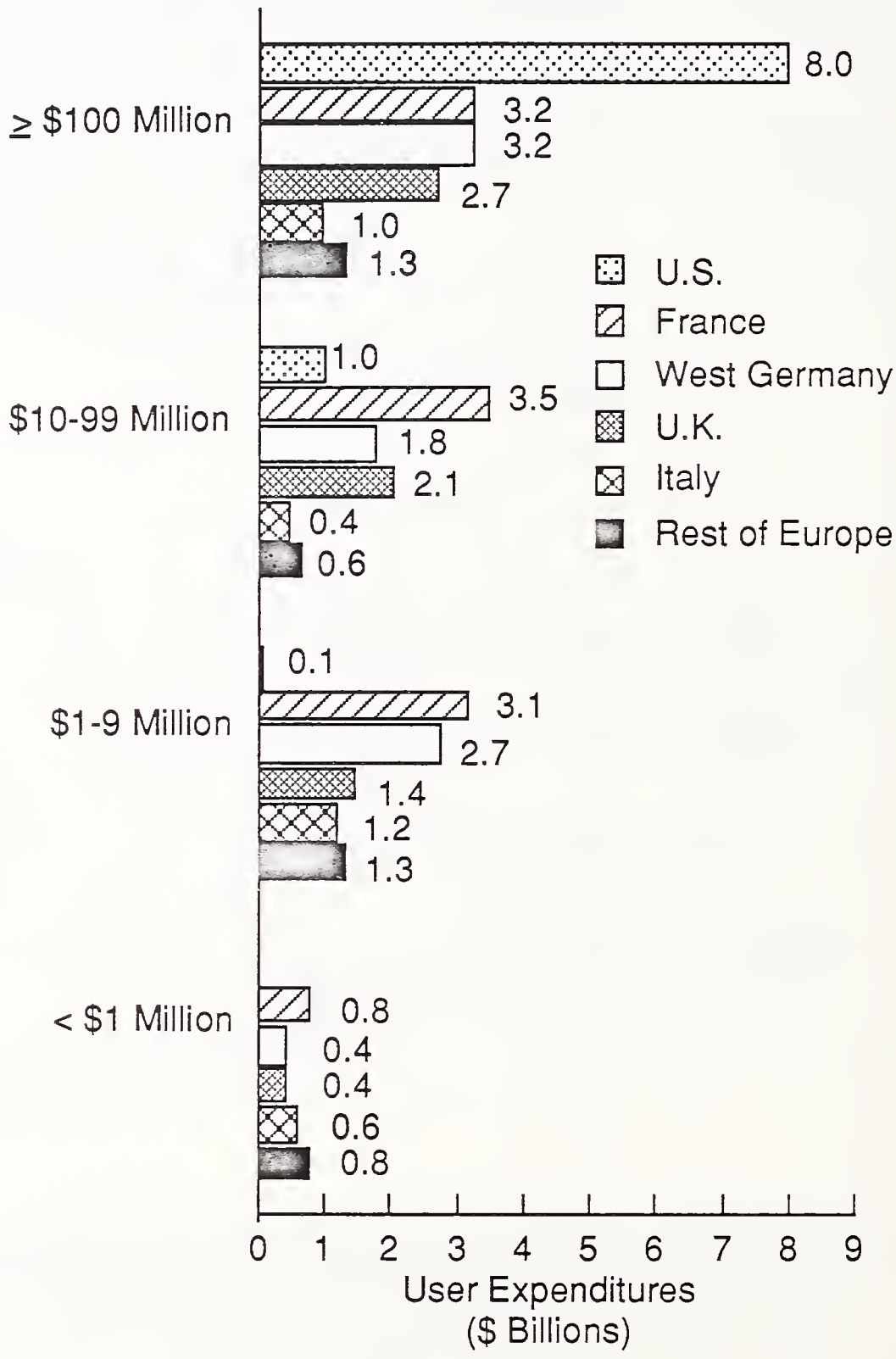
EXHIBIT VI-9

EEC Software and Services Market by Nationality of Vendor and Annual Vendor Revenue, 1989



French vendors are the largest group in the $10 to $100 million range. Out of the 320 vendors, some 100 are French, and control some 35 percent of the total revenue in this range. French vendors are the biggest

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single national vendor group in all the other revenue ranges, although West German vendors are also very strong in the $1 to $10 million range.

Exhibit VI-10 combines the breakdown of vendors by number and revenue ranges. It illustrates just how important the highest revenue range is for the overall EEC software and services market. The $100 million-plus revenue range accounts for $19.4 billion, or some 44 percent of the total market. Since this very large volume of revenue is generated by just 57 vendors, of which 17 are equipment vendors, any analysis of the EEC software and services market has to take account of these major vendors and the potential influence that they have on developments.

The next-largest range in terms of generating revenues is the $1 to $10 million revenue range, not the $10 to $100 million. This is very significant in understanding the structure of the EEC software and services market.

Virtually all equipment vendors fall into the $100 million-plus revenue range. Hence the lower revenue ranges are generated by independent vendors. Independent vendors generally begin by offering products and services to local customers. If they are successful with one key product or service, then they can grow relatively freely to $10 million within the national niche market for this product or service.

At around the $10 million revenue level, vendors may find that they have reached saturation in their key national niche market for their leading product or service. They then have a major strategic problem of how to grow further. In the past, they have had to make the decision whether to expand by moving into related foreign niche markets, or move into another national niche market that may be unrelated to their first, successful niche.

Few vendors manage to move successfully out of their single product or service niche, and hence get stuck in the $1 to 10 million revenue range. Many try to expand further, but few make it. In many instances, vendors get their growth strategies wrong, adversely affecting their profits, and get taken over. As a result, there are only some 380 independent vendors with annual revenues over $10 million, out of a total of 30,000.

The reason it is necessary to understand this structure and to be able to appreciate fully the impact of the Single European Act on the EEC software and services market in the 1990s, is that the key aims of the Single European Act are to bring down barriers and to open up specific end-user markets and make them pan-European. As this happens, software and services vendors in these markets should find that their traditional niche market gets bigger geographically, without them having to undertake major redesign work.

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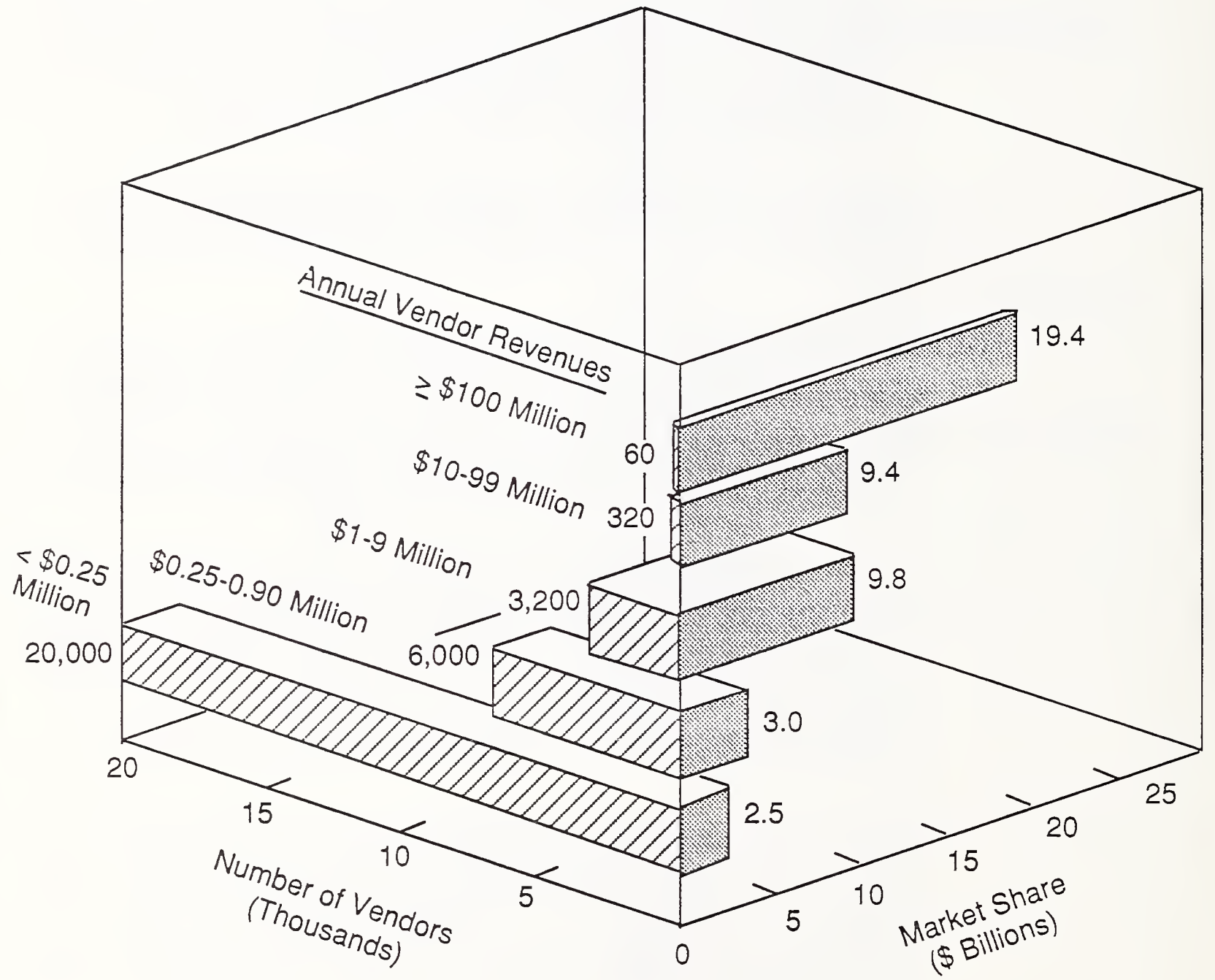
EXHIBIT VI-10

EEC Software and Services Market by Annual Vendor Revenue and Number of Vendors, 1989



Total 1989 EEC Market = $44.1 Billion

Take, for instance, a vendor traditionally in the French transport market. Although the vendor's market might appear international, it has had major problems in selling its products and services to the U.K., German, Italian and Spanish transport companies because they have operated according to their national insurance practices and within their national

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tax and accounting regulations, which have been very different to those in France.

As the Single European Act reduces the barriers to French transport companies offering their services throughout the EEC, the French software and services vendor can naturally expand its products and services to follow its clients around Europe. Having gained a foreign footing by following clients, it becomes a relatively low risk to offer similar services to other indigenous insurance companies.

For the EEC software and services industry, the Single European Act will positively affect vendors in those niche markets where their clients take advantage of the reduction in any traditional barriers. U.K. vendors, strong in banking, finance and insurance, should benefit from the Single European Act, as the U.K. is strong in these vertical markets. West German vendors should do well in manufacturing products and services, and French vendors in transport and other service sectors.

Vendors should look at their national economies to identify which vertical markets are likely to benefit most from the Single European Act in the 1990s. It will be in these markets that the greatest benefits will present themselves country by country. By using the expansion of their traditional national clients into pan-European market sectors, these national vendors have the opportunity to jump the $10 million revenue barrier with minimum of risk, and to become one of the few big European software and services vendors with revenues of $10 to $100 million.

C

National Competition

Exhibit VI-11 illustrates the foreign involvement in the major EEC software and services markets in 1989. In terms of end-user revenues, the U.K. has the greatest foreign participation, totalling some $3.5 billion. U.S. vendors account for some $2.7 billion, and other European vendors for some $0.8 billion out of the total U.K. market of $9.1 billion. The market with the next-largest foreign involvement is West Germany.

Exhibit VI-12 shows the percentage breakdown of foreign involvement in each market. Spain has the greatest percentage involvement by foreign vendors, which accounts for some 67 percent of the total Spanish software and services market. For other EEC markets, foreign vendors control some 20 to 40 percent. U.S. vendors generally control around 20 percent, and foreign European vendors seven percent.

The conclusion that can be drawn from this analysis is that U.S. vendors have made three times the export penetration into individual European markets that European vendors have. This past ability of U.S. vendors to strike into Europe and capture more foreign market share than European vendors, should be a very worrying fact for the EEC. In the 1990s there is nothing to protect the indigenous EEC software and services industry

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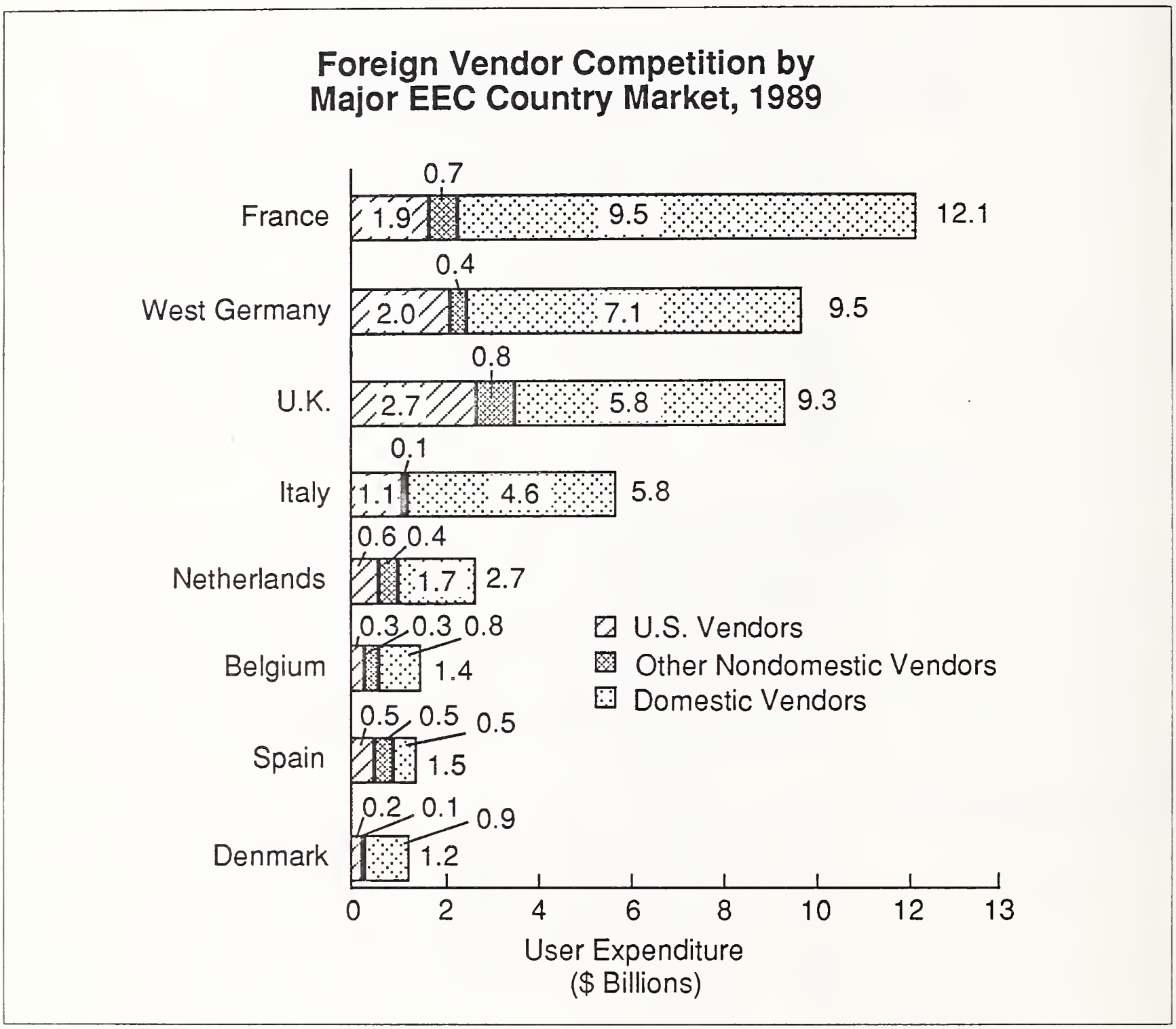
EXHIBIT VI-11



from U.S. competition, and in many instances U.S. vendors are in a far better position to exploit a more open Europe than are indigenous European vendors.

The strength of U.S. vendors in Europe tends to be in both size and geographic coverage. To have made the expansion across the Atlantic, virtually all U.S. vendors have global revenues well in excess of $10 million; most have over $100 million per annum. Having arrived in Europe, they do not have the traditional allegiance to any specific national market, unlike their European competitors. In the past this may

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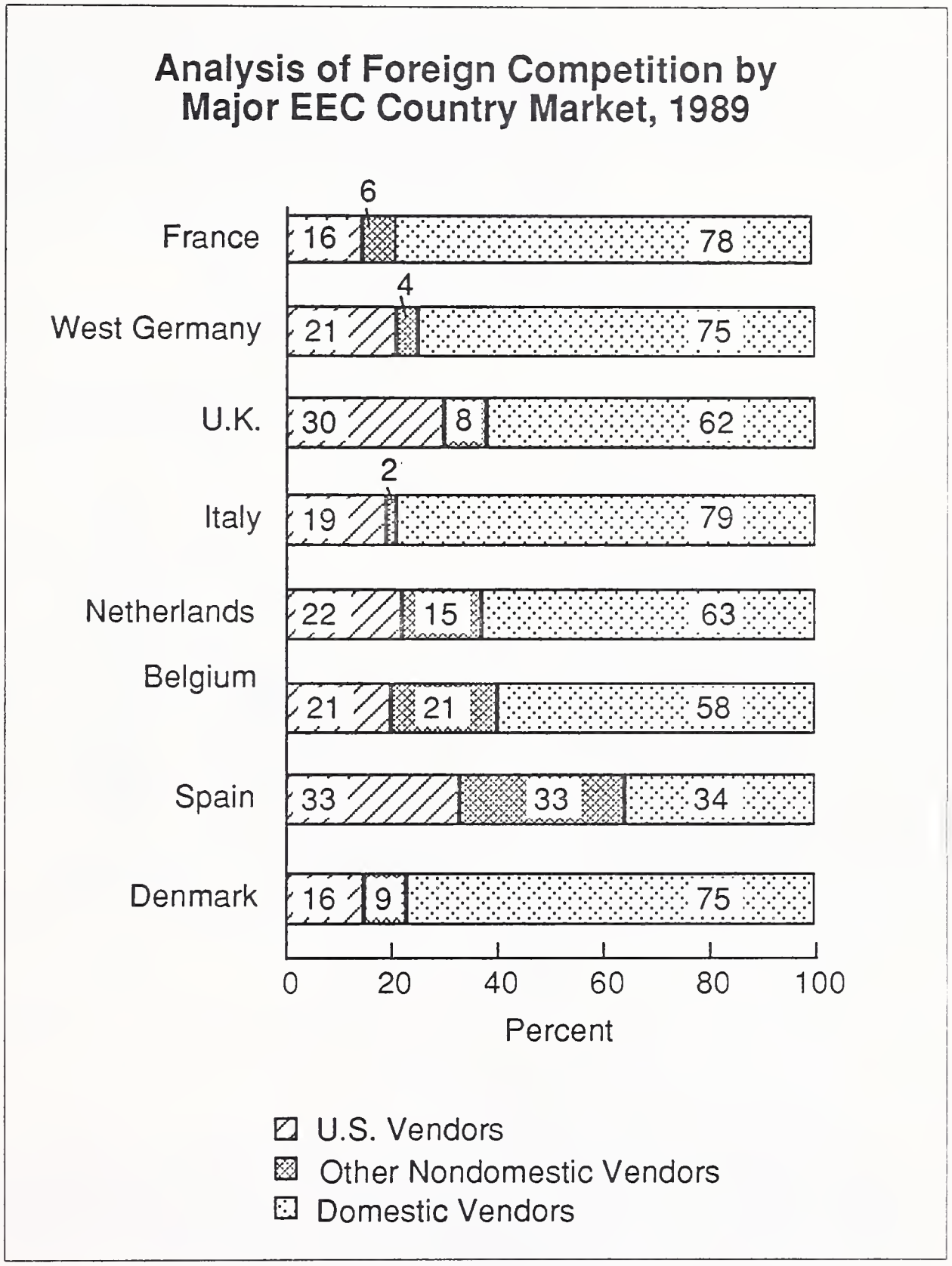
EXHIBIT VI-12



have been a disadvantage. In the 1990s it puts them at a major advantage, as they already have a pan-European organisation in place.

The effect of the Single European Act on the EEC software and services market sectors will be principally to break down the traditional national barriers in specific niche markets. This should open them up so they can evolve from a number of separate national markets to a single pan-European market. There will still be language differences, but other cultural barriers should be minimised.

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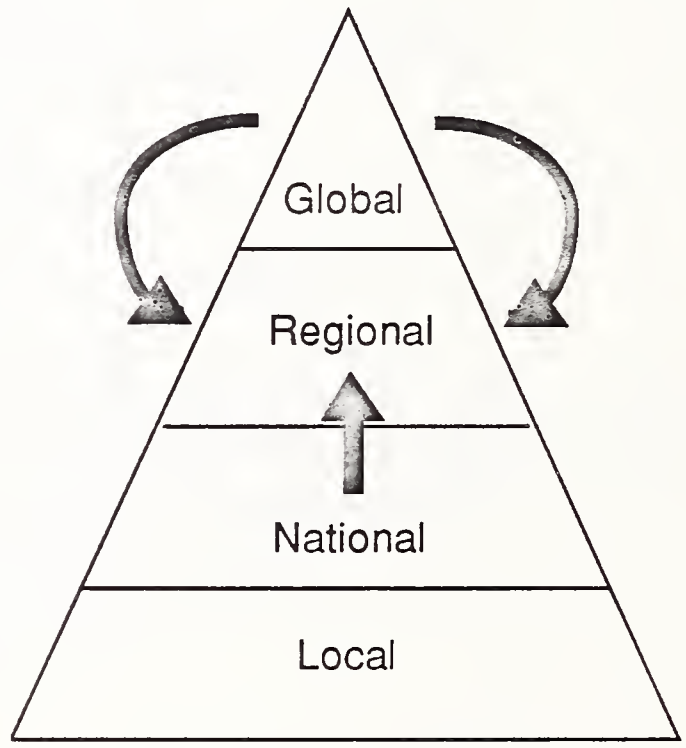
There will be considerable competition by many vendors to benefit from these opportunities created by the Single European Act. Exhibit VI-13 illustrates which vendors will most likely try to exploit these opportunities. Those national vendors which have traditionally been in the relevant niche market sectors will try to expand into the wider pan-European market, as barriers are brought down. Large global vendors will also see that the creation of new pan-European sectors are ideal markets for them to target.

EXHIBIT VI-13

Competitive Opportunities and Threats



As a result, there is likely to be considerable competition for control over those sectors being positively affected by the Single European Act. It is even possible that an oversupply of software and services will rapidly develop to serve these markets.

In addition, it is likely that there will be much merger and acquisition activity in these sectors. The issue facing the European software and services industry is whether it will be the indigenous EEC vendors who will be left controlling these new, larger markets, or foreign vendors, such as those from the U.S. With the considerable strength of many U.S. vendors in the European market, it is very possible that U.S. vendors will take over control of many of these new markets, unless the Europeans rapidly grow to be strong enough to retain control of these markets themselves.

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D

Member State Markets

Exhibit VI-14 illustrates that the EEC software and services market is forecast to grow from $44.1 billion to $104.4 billion over the period 1989 to 1994. This represents on average a 19 percent annual growth rate.

EXHIBIT VI-14

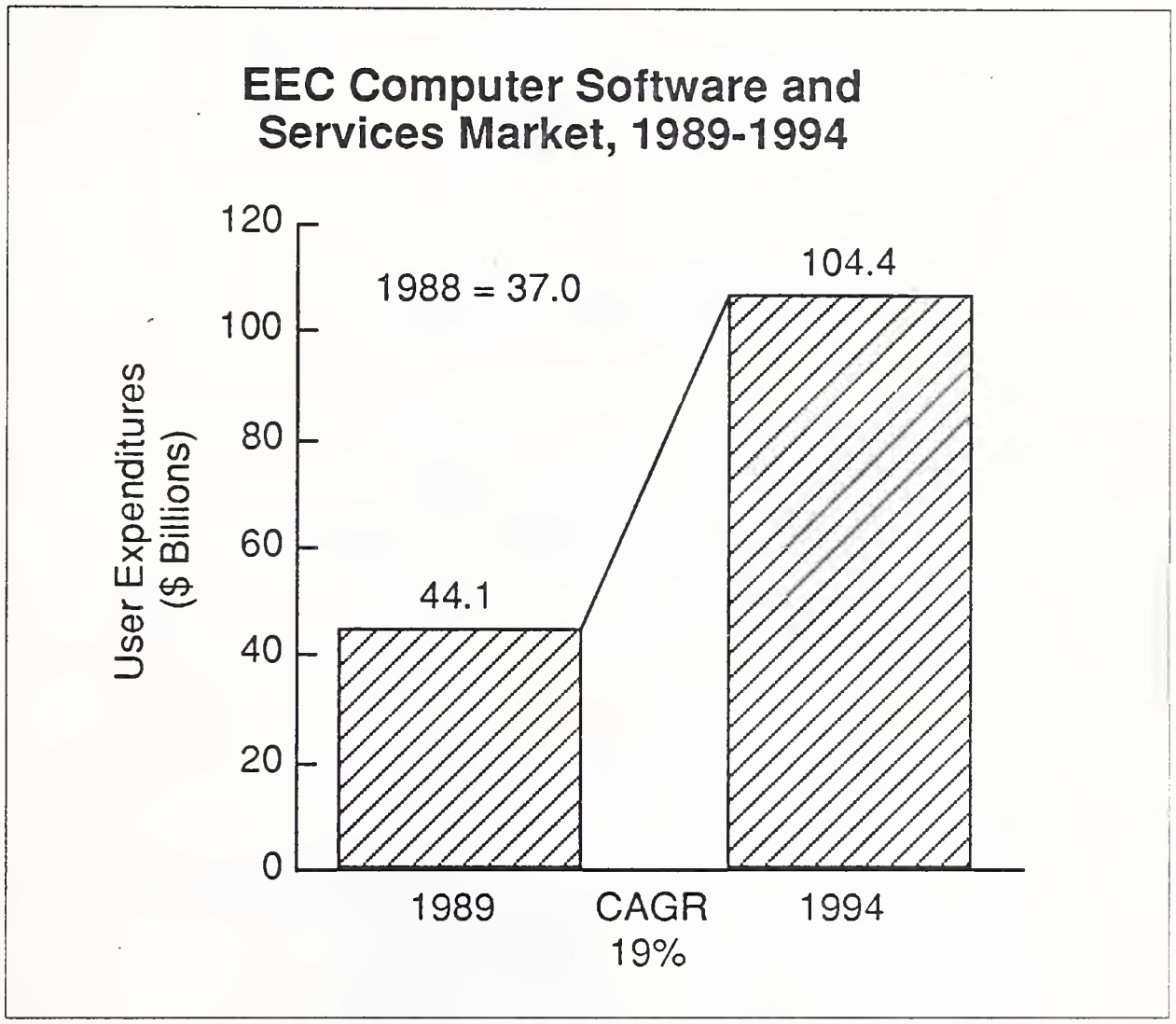

Exhibit VI-1 gave the breakdown of the 1989 market by individual member state market. France has the largest software and services national market in the EEC, accounting for 27 percent of the total market. The three largest country markets, France, West Germany and the U.K. account for 70 percent of the overall EEC software and services market.

Exhibit VI-15 lists the top European and U.S. vendors and their 1988 EEC revenues and market share. The top five European vendors account for some 10 percent of the total EEC software and services market, whilst the top five U.S. vendors, 13 percent. Seven of these top ten are equipment vendors, three are independents. Of the top European vendors, two are German, two French, and one U.K. This exhibit reinforces the arguments put forward earlier concerning the strength of both equipment vendors and U.S. vendors in the EEC software and services market.

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EXHIBIT VI-15

Top EEC Vendor Rankings and Market Shares, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Nixdorf	2.6	960
2	Siemens	2.0	730
3	Reuters	1.9	720
4	Cap Gemini Sogeti	1.9	705
5	Bull	1.7	620
Top U.S. Vendors			
1	IBM	8.2	3,030
2	Unisys	1.4	520
3	Prime	1.4	515
4	GEIS	1.0	360
5	McDonnell Douglas	0.9	345
Other Vendors		77.0	28,495
Total		100.0	37,000

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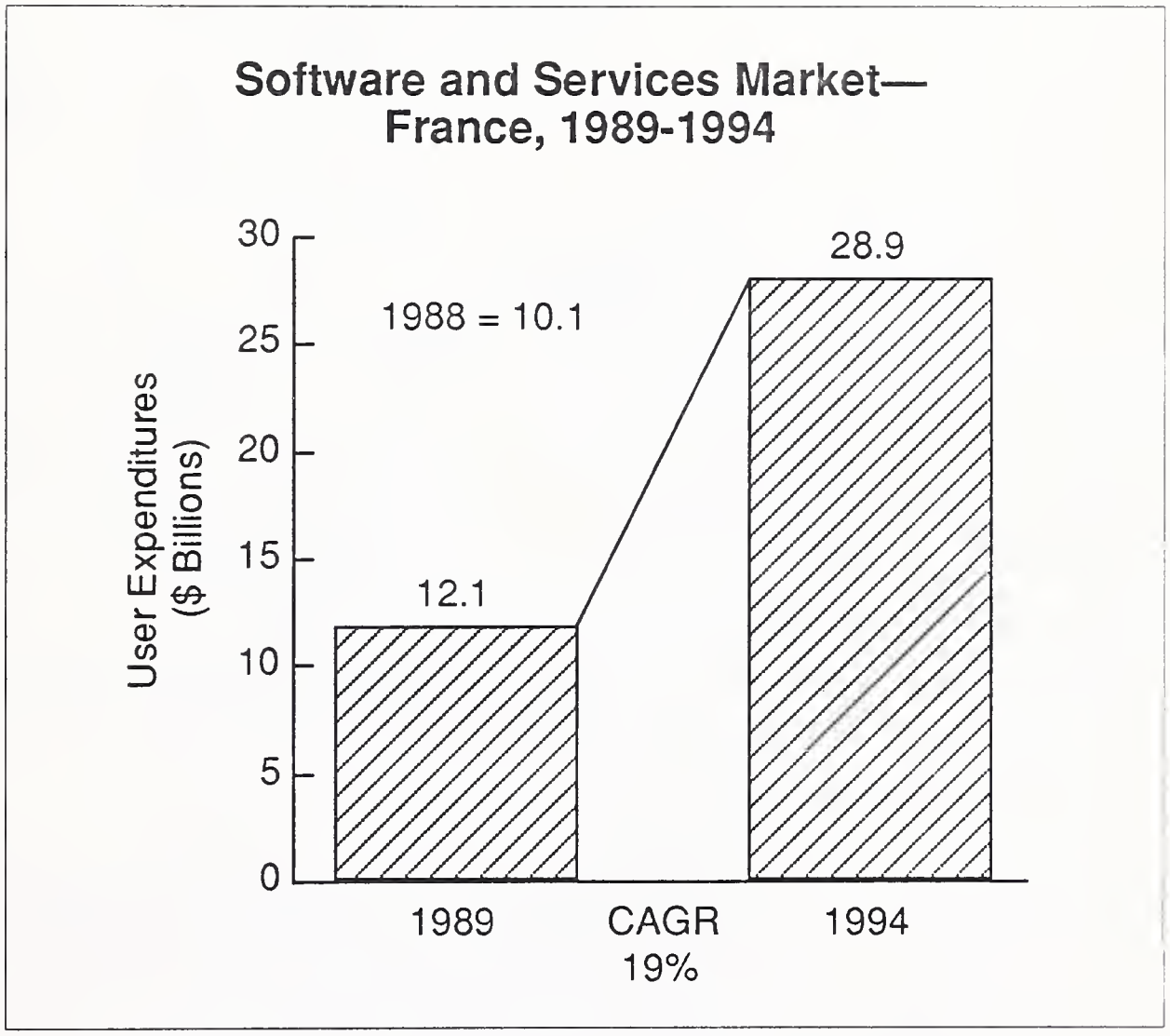
1. France

Exhibit VI-16 illustrates that the software and services market in France should grow from $12.1 billion in 1989 to $28.9 billion, with a 19 percent average growth rate. France has a very healthy software and services industry. French vendors are concerned about competition from other EEC vendors, notably from the U.K., and to a lesser extent from the Netherlands via Belgium, but they are aware that the major threat could be from U.S. vendors, who are very strong in Europe.

EXHIBIT VI-16



As Exhibit VI-17 indicates, professional services is the most important delivery mode for France. The banking and finance sector provides some 20 to 25 percent of the total software and services revenues in France. There is concern in France about the eventual location of the European Bank. The European Commission decision on where it is located will affect the banking and finance sector in France. Both London and Frankfurt are strong contenders for it.

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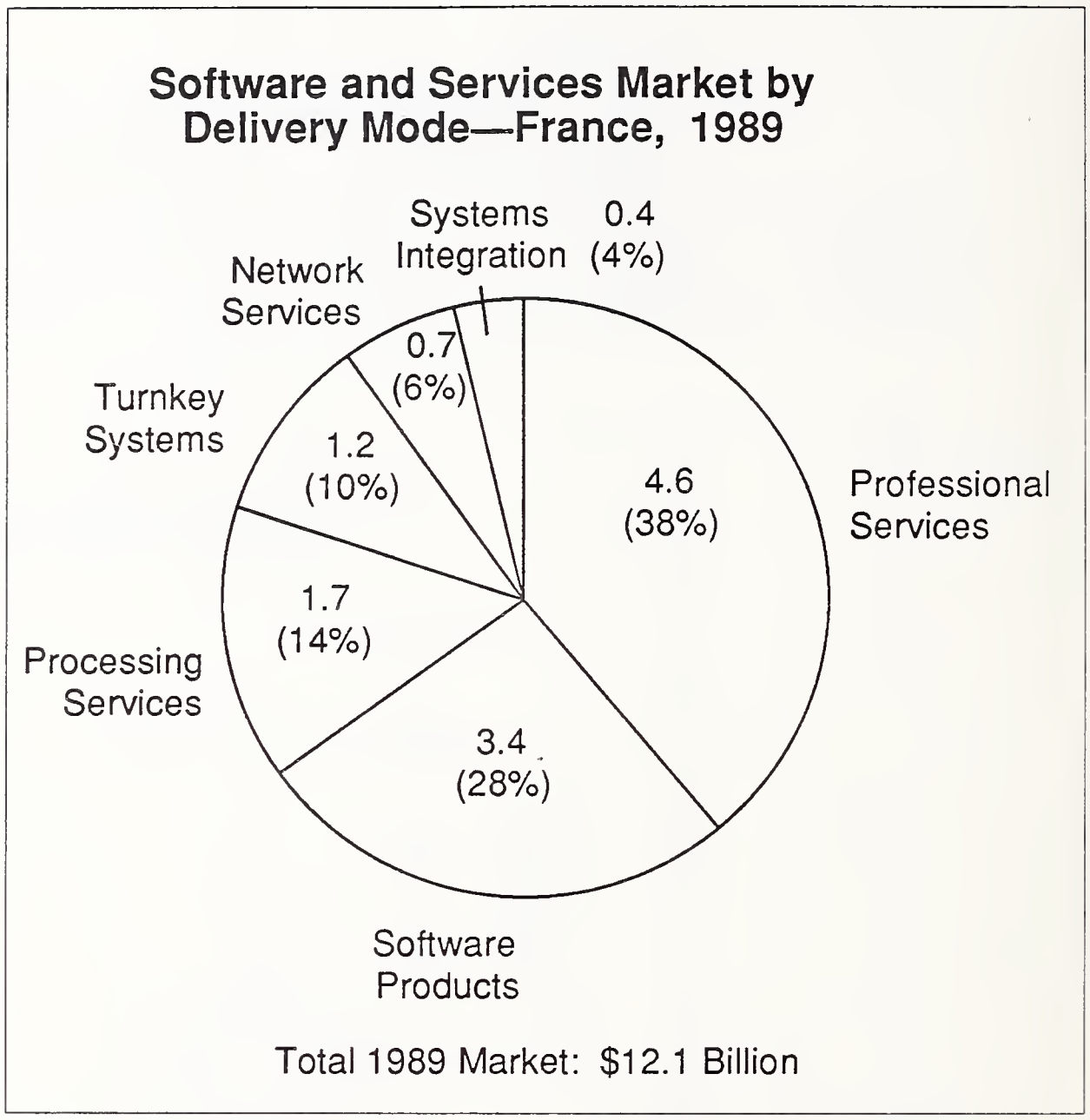
EXHIBIT VI-17



All of the top European vendors in the French market are domestic French companies—as Exhibit VI-18 illustrates, four independents, and Bull. Together, these top European vendors control some 14 percent of the French market, whereas the top five U.S. vendors only control some 10 percent. IBM is the leading vendor, followed by Cap Gemini Sogeti, which is the leading independent vendor in Europe.

France has many medium-sized and large independent vendors who are actively exporting their products and services. A number of Europe's largest independent vendors are French. In addition to Cap Gemini Sogeti, there is Sema Group, Sligos and GSI.

The French have already been very successful in exporting their products and services to Spain, and to a lesser degree to Italy. The French are strong in providing bespoke software services through the professional

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EXHIBIT VI-18

Top Vendor Rankings and Market Shares—France, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Cap Gemini Sogeti	4.4	440
2	Bull	3.4	340
3	Concept	3.0	300
4	Sligos	2.7	265
5	GSI	1.6	160
Top U.S. Vendors			
1	IBM	6.1	620
2	Unisys	1.0	105
3	Prime	0.8	80
4	GEIS	0.7	75
5	Computer Associates	0.7	75
Other Vendors		75.6	7,640
Total		100.0	10,100

services delivery mode. Culturally, the French are great theoreticians. French professional service vendors have been successful in selling these skills throughout Europe.

In most other sectors of the information services market, the French are not major exporters. They often prefer to remain in their domestic market, and so are likely to exploit benefits arising from the Single European Act only in very specific market sectors.

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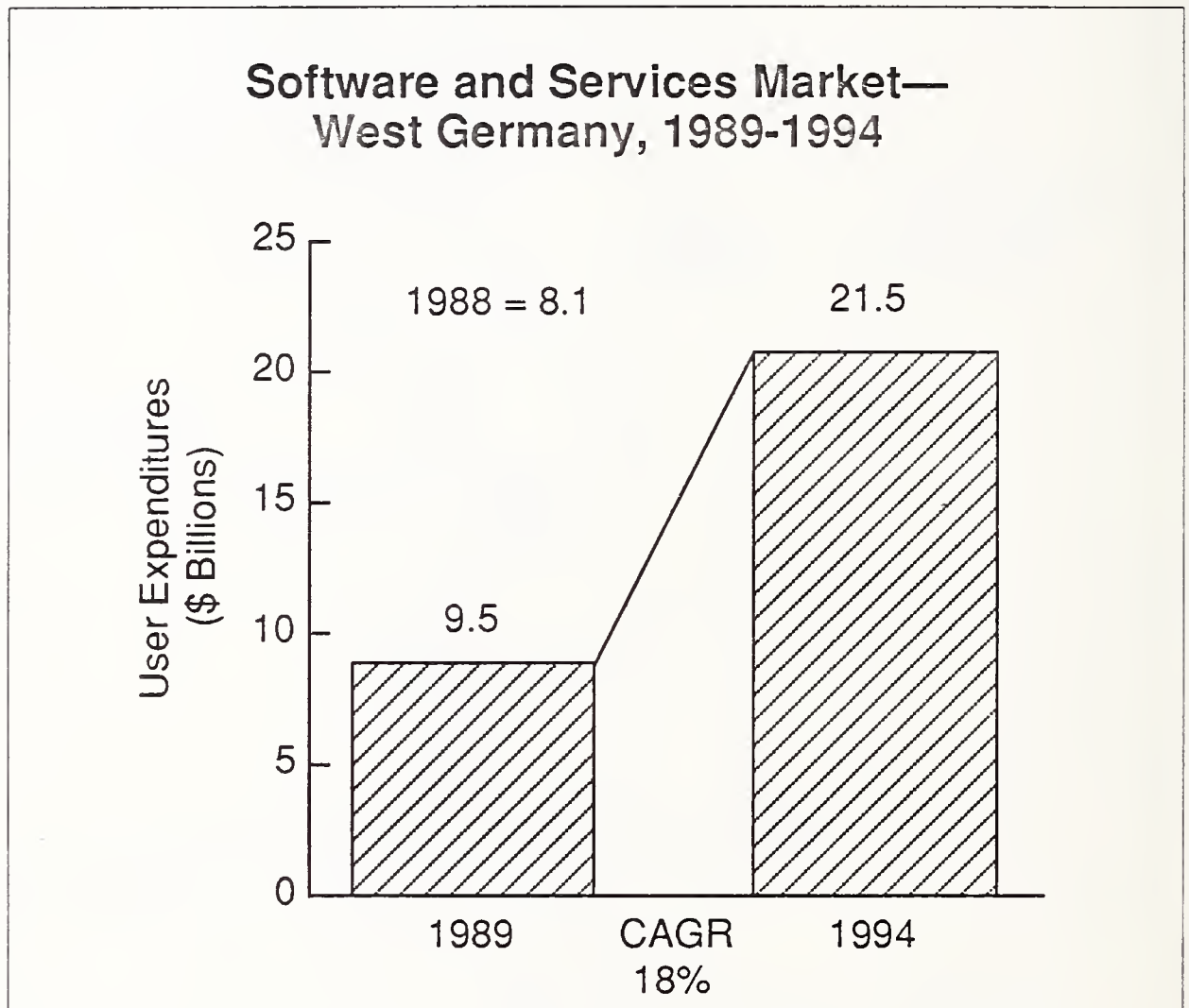
2. West Germany

Exhibit VI-19 illustrates the growth of the West German software and services market over the period 1989 to 1994. INPUT forecasts that this market should grow from $9.5 billion in 1989 to $21.5 billion in 1994, with an average growth rate of 18 percent.

EXHIBIT VI-19



Although the West German economy is very strong, it is a fragmented market. The German federal system and industrial clustering in different geographic regions causes fragmentation in the West German software and services industry as well.

Germany's strength lies in its manufacturing base. Software products are strong in West Germany, as are turnkey systems. Together they represent 53 percent of the total market, as Exhibit VI-20 illustrates.

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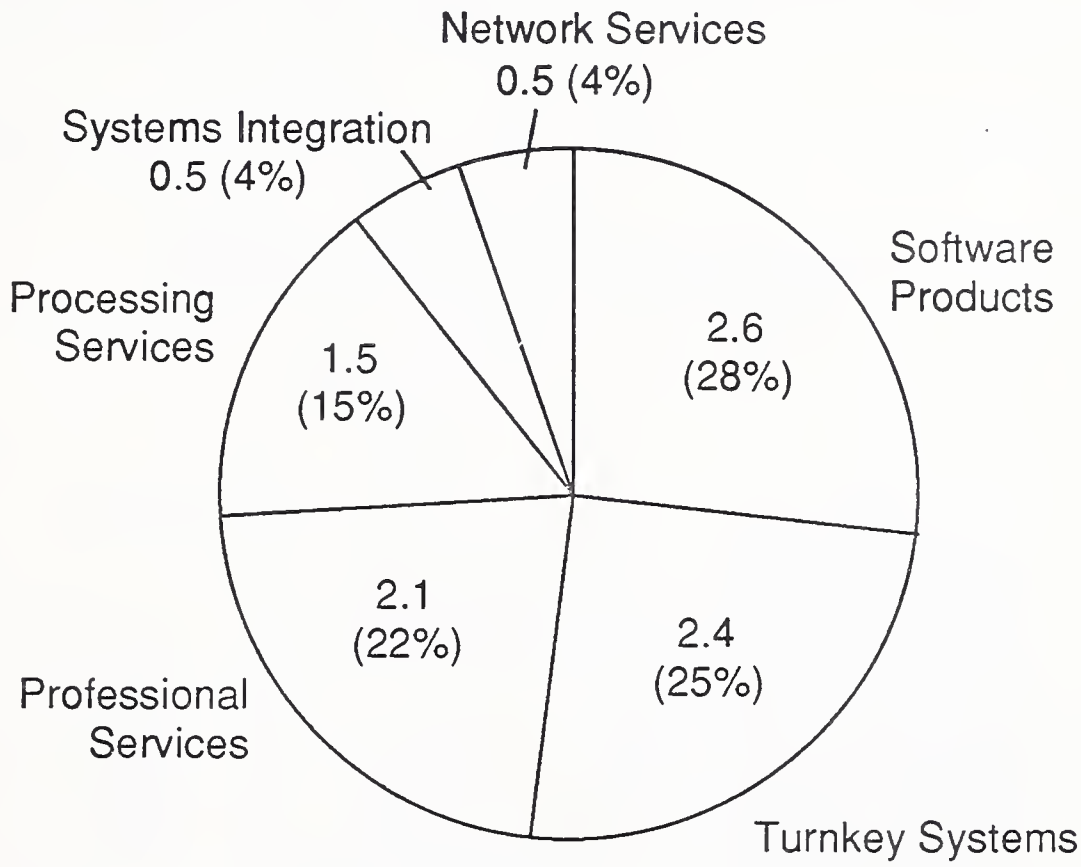
EXHIBIT VI-20

Software and Services Market by Delivery Mode—West Germany, 1989



Total 1989 Market: $9.5 Billion

As with France, all the top European vendors in the West German software and services market are domestically owned companies, as is shown in Exhibit VI-21. With three domestic equipment vendors in West Germany, it is not surprising to see all three in the top ranking. Because of the domestic strength of these German equipment vendors, the top five European vendors account for 21 percent of the total German information services market, whereas the top U.S. vendors only account for 14 percent. These are significantly higher percentages than in France.

The two leading independent vendors are typical examples of German domestic vendors. Datev is a cooperative society, principally providing processing services to German tax consultants. Taylorix sells turnkey systems on PCs to small German businesses. Nearly all German independent vendors concentrate on domestic end users, although they occasionally venture into Switzerland and Austria. Only Software AG and SAP are important independent vendors outside of the German-speaking parts of Europe.

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EXHIBIT VI-21

Top Vendor Rankings and Market Shares—West Germany, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Nixdorf	7.3	595
2	Siemens	7.0	570
3	Datev	3.2	260
4	Mannesman Kienzle	2.4	195
5	Taylorix	1.4	110
Top U.S. Vendors			
1	IBM	9.3	750
2	Prime	2.2	175
3	Intergraph	1.0	85
4	Unisys	0.9	70
5	Computer Associates	0.8	65
Other Vendors		64.5	5,225
Total		100.0	8,100

Apart from the three German equipment vendors and a very small number of independents, West Germany is not well-suited to exploit growing markets in the EEC today. If vendors have looked to export markets, they have nearly always confined themselves to other German-speaking countries, notably Austria and Switzerland. However, if Eastern Europe continues to move politically towards the west, West German vendors, with their traditional links to the Eastern Bloc through East Germany, will most likely be the first to exploit this new potential market.

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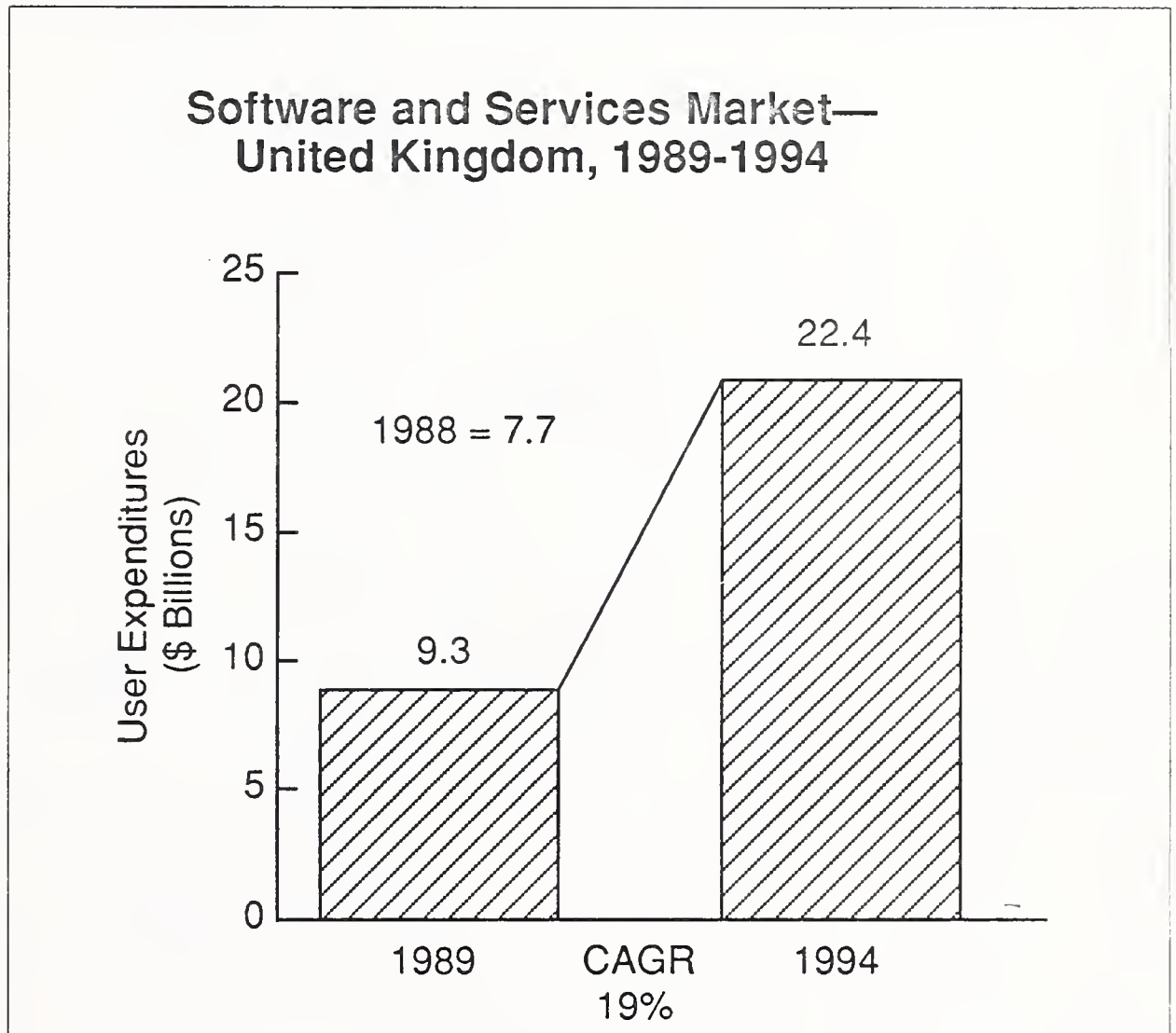
3. United Kingdom

Exhibit VI-22 illustrates INPUT's forecast for the U.K. software and services market, showing that the market should grow from $9.3 billion to $22.4 billion over the period 1989 to 1994, with an average growth rate of 19 percent per annum.

EXHIBIT VI-22



The strength of the U.K. economy is in financial services, rather than manufacturing. The U.K. manufacturing base has been eroded in recent years, and the country is having problems in replacing lost production. Traditionally, the U.K. has been the first market into which U.S. vendors have moved when starting to export to Europe. In recent years, this preference for the U.K. has begun to be replaced firstly by the Netherlands, and more recently by Belgium.

This gradual shift in preference of where U.S. vendors locate their European headquarters may be good for U.K. software and services vendors, as it might reduce the likelihood of the U.K. being the first choice for acquisitions by U.S. vendors. Such a movement will be bad for the U.K. economy, although the effect will be minimal.

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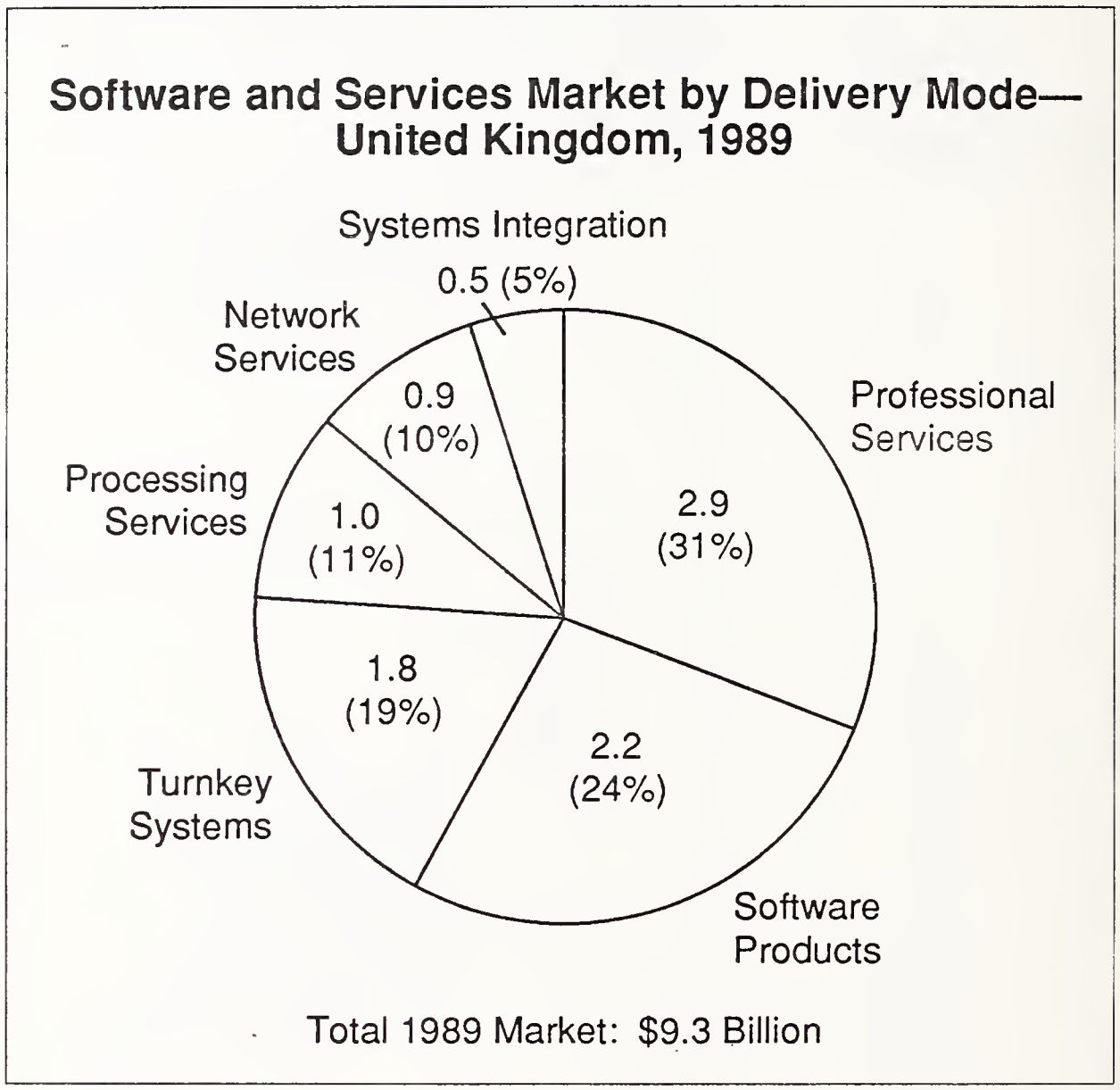
As Exhibit VI-23 illustrates, professional services is the most important delivery mode in the U.K. This accounts for some 31 percent of the total market, followed by software products.

EXHIBIT VI-23



As Exhibit VI-24 illustrates, only four of the top five independents in the U.K. are British. The Sema Group was formed in early 1988 by the U.K.-owned CAP Group and Sema Metra of France. Like France, the U.K. has many medium-to-large independent vendors exporting their services. Major U.K. independent vendors, apart from the three listed in the top five rankings, are Thorn EMI, Logica, Hoskyns, Computer Management Group and Geac Computers.

Both the top five independent and the top five equipment vendors account for some 15 percent of the total U.K. information services market. IBM is the largest overall vendor. The U.K. is an important market for many U.S. vendors, whether independent or equipment vendors.

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EXHIBIT VI-24

Top Vendor Rankings and Market Shares—United Kingdom, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Reuters	4.9	380
2	ICL	4.3	330
3	SD-Scicon	2.1	165
4	Hoskyns	2.1	160
5	Sema	1.9	150
Top U.S. Vendors			
1	IBM	7.1	545
2	McDonnell Douglas	3.0	235
3	Prime	2.7	210
4	Unisys	1.6	125
5	Digital	1.2	95
Other Vendors		68.9	5,305
Total		100.0	7,700

Of all the European nations, the British probably feel the most comfortable in exporting their computer software and services through Europe. One therefore sees many small- to medium-sized U.K. vendors looking across the Channel at ways in which they can export their products and services. There also tends to be more merger and acquisition activity in the U.K. market, reflecting a more open computer software and services market.

It is likely that the U.K. will make a considerable effort to exploit growing pan-European markets. This they will attempt to do by using their own products and services, with foreign distributors or subsidiaries. However, they will look to cooperative agreements with foreign

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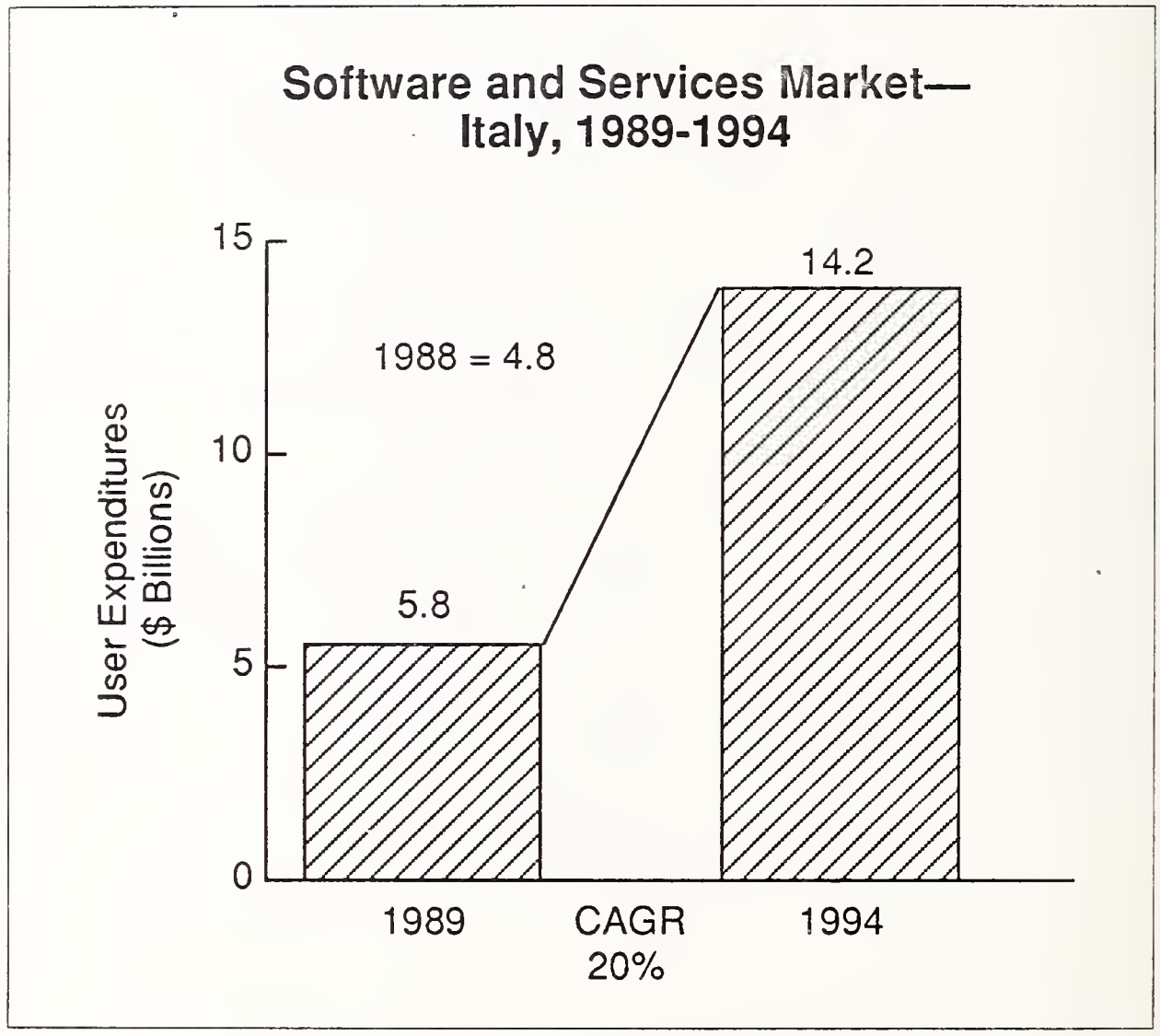
competitors to give them greater critical mass more quickly than could be achieved through growth by themselves.

4. Italy

Exhibit VI-25 gives INPUT's forecast for the Italian market. This should grow from $5.8 billion in 1989 to $14.2 billion in 1994. The average annual growth rate over this five-year period is forecast at 19 percent.

EXHIBIT VI-25



The involvement of the Italian state in the large information services vendors is considerable. In addition, the Italian public sector is perceived as problematic in the context of a more open Europe, due to its long-standing patronage and inefficiency. The flexibility of the large number of small domestic Italian vendors, and the inefficiency of the large ones, have tended to cancel each other out in the past.

Despite being very "pro-European," Italy is well behind the other member states in implementing the Single European Act legislation. In addition, Italian vendors stated to INPUT during the research that the Single European Act could be more of a threat than an opportunity to them. The

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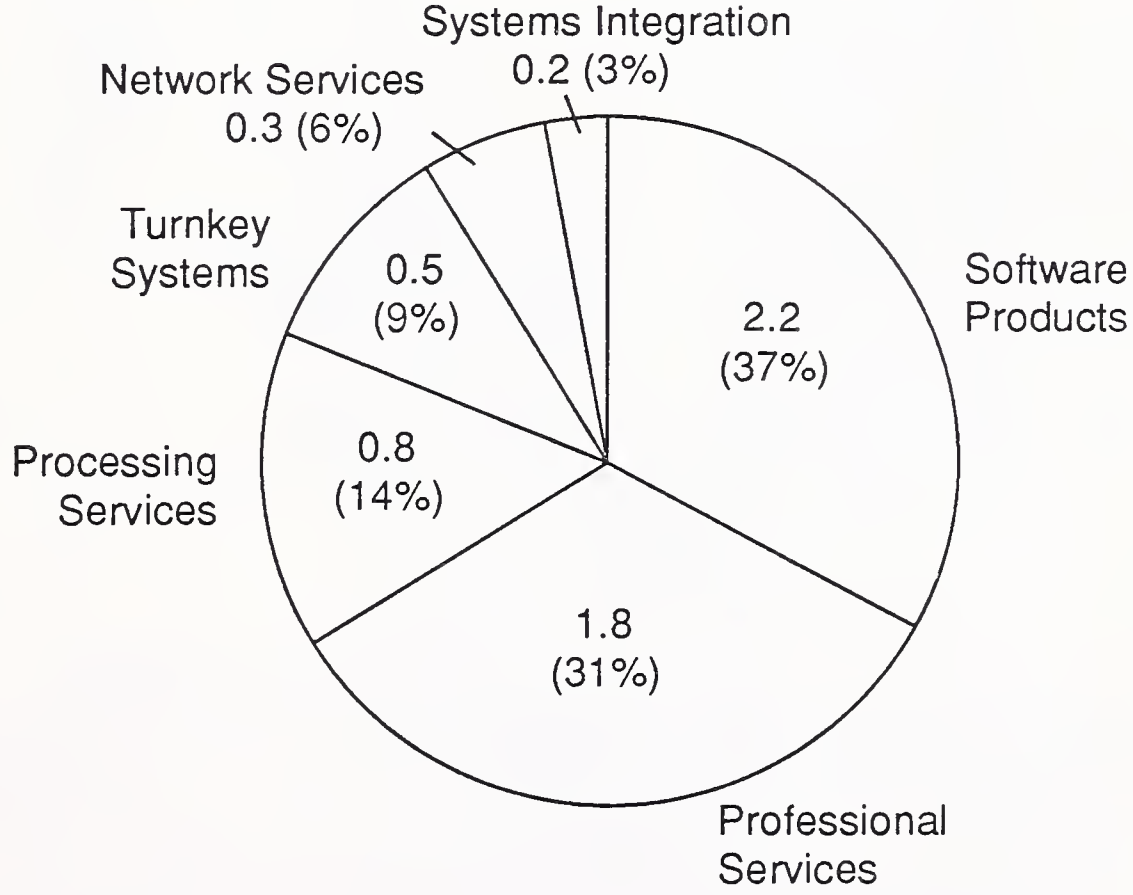
contract that Cap Gemini Sogeti has recently won with the Italian State Railways could be a typical example of such a threat.

It is important in Italy to recognize the differences between the industrial north, around Milan, the administrative centre in Rome, and the very poor south. The Italian software and services industry tends to be divided between vendors of industrial products and services in the north, and government sector services in the centre of the country. There are very few vendors in the south.

As Exhibit VI-26 indicates, software products and professional services accounted for 68 percent of the total Italian market in 1989. Italians prefer bespoke solutions to standard solutions. Turnkey systems therefore represent a small proportion of the Italian market.

EXHIBIT VI-26

Software and Services Market by Delivery Mode—Italy, 1989



Total 1989 Market: $5.8 Billion

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State-owned Finsiel Group, Olivetti and IBM account for some 27 percent of the total Italian software and services market, as is illustrated in Exhibit VI-27. U.S. vendors other than IBM have a relatively small market share. In total, the top five European vendors account for some 20 percent of the Italian market, and the top U.S. vendors for some 15 percent.

EXHIBIT VI-27

Top Vendor Rankings and Market Shares—Italy, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Finsiel	9.8	470
2	Olivetti	6.0	290
3	Bull	2.2	105
4	Reuters	1.5	70
5	Cerved	1.3	60
Top U.S. Vendors			
1	IBM	11.4	545
2	Andersen	1.1	55
3	Unisys	1.0	50
4	GEIS	1.0	50
5	Computer Associates	0.7	35
Other Vendors		64.0	3,070
Total		100.0	4,800

Apart from Olivetti, there are no Italian vendors exporting their products and services throughout Europe. Italian vendors are therefore in a weak position to exploit the EEC market in the 1990s. French vendors have already begun to move into Italy, often by acquiring local software and services companies, rather than setting up their own subsidiaries.

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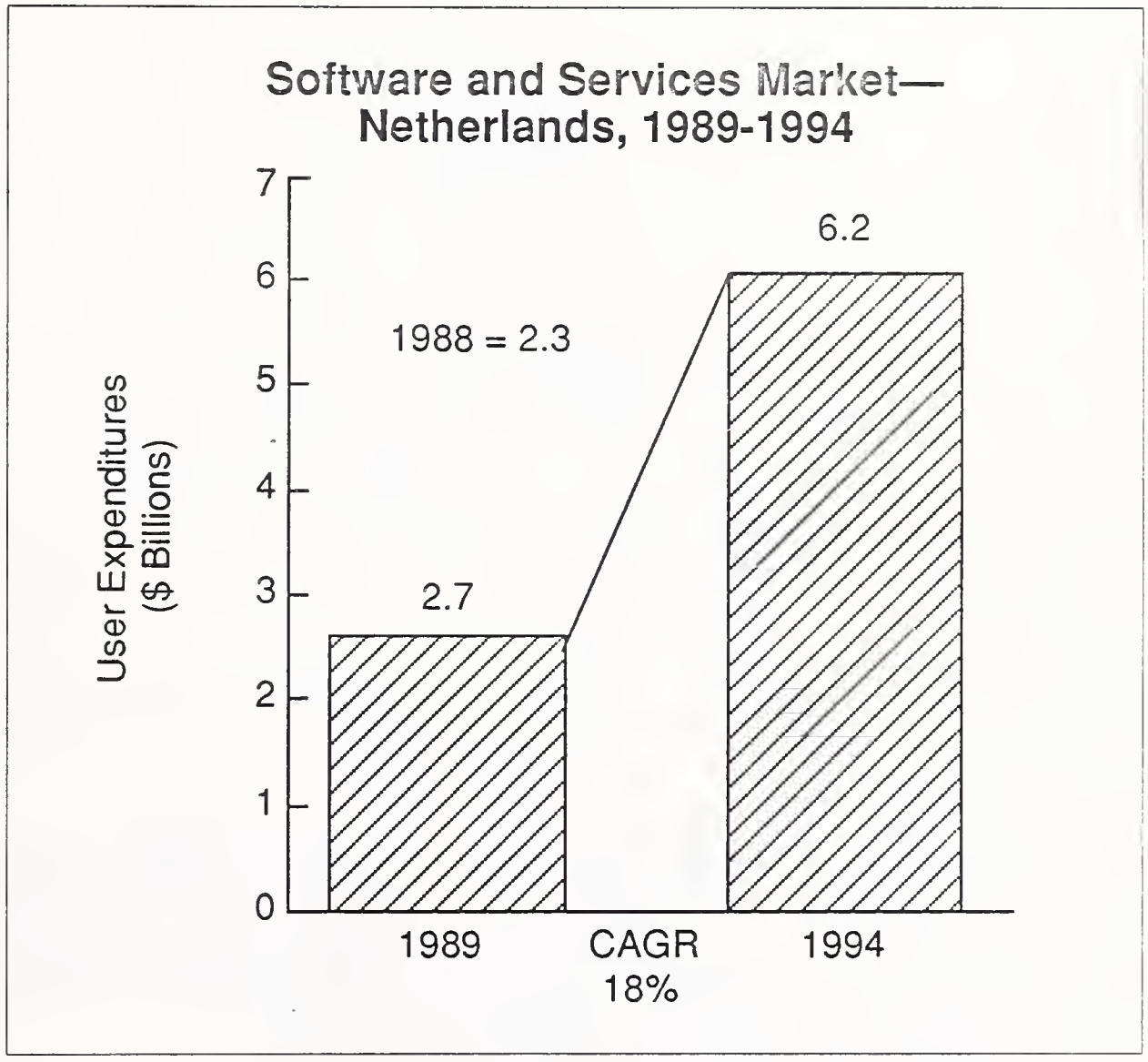
5. Netherlands

Exhibit VI-28 illustrates that the Netherlands software and services market should grow from $2.7 billion to $6.2 billion by 1994. The average growth rate is forecast at 18 percent per annum. Professional services is the major delivery mode in the Netherlands, as Exhibit VI-29 illustrates.

EXHIBIT VI-28



The Netherlands has the highest population density in Europe. Internal communications are good, and there is an extremely high standard of English, French, German and Italian spoken. The government has set company taxation at an attractively low level, but personal taxation is very high. Some U.S. vendors have therefore established regional European headquarters in the Netherlands.

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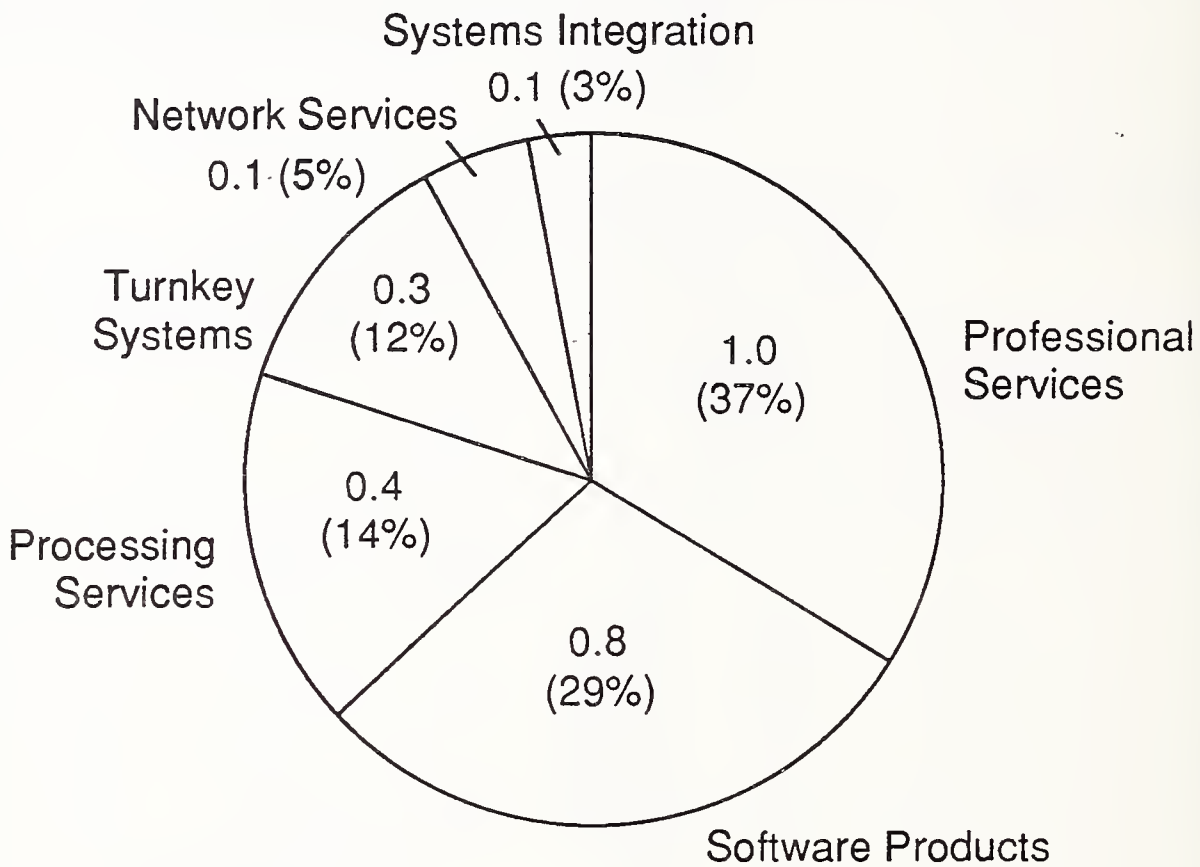
EXHIBIT VI-29

Software and Services Market by Delivery Mode—Netherlands, 1989



Total 1989 Market: $2.7 Billion

All the top independent vendors in the Dutch market are domestically owned companies, except for Cap Gemini Sogeti, as illustrated by Exhibit VI-30. In the Netherlands, Cap Gemini did have two separate subsidiaries, Cap Gemini Nederlands and Pandata. During 1989 these were merged into one company.

The top five European vendors account for some 26 percent of the total Dutch information services market. Both the two leading European vendors specialise in professional services. Unlike most EEC country markets, IBM is not the leading vendor in the Netherlands. Of the top five leading U.S. vendors, all except Digital have large centres of operations in the Netherlands. IBM, GEIS and EDS all have major computing centres in the Netherlands, from which they offer processing and network services to the rest of the EEC. Intergraph has set up its European headquarters in the Netherlands.

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EXHIBIT VI-30

Top Vendor Rankings and Market Shares—Netherlands, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Volmac	9.8	225
2	Cap Gemini Sogeti	4.8	110
3	Raaet	4.6	105
4	Philips	3.7	85
5	Datep	3.0	70
Top U.S. Vendors			
1	IBM	7.4	170
2	GEIS	1.1	25
3	EDS	1.1	25
4	Digital	1.1	25
5	Intergraph	0.9	20
Other Vendors		62.5	1,440
Total		100.0	2,300

Both Volmac and Raaet export products and services to Belgium and Luxembourg, but little further. Dutch vendors are principally domestically orientated. They do not have sufficient domestic demand to develop major products and services from which they can develop major exports.

Although the Netherlands has prided itself on being "the gateway to Europe" for freight, its attempts to do the same for electronics have so far failed.

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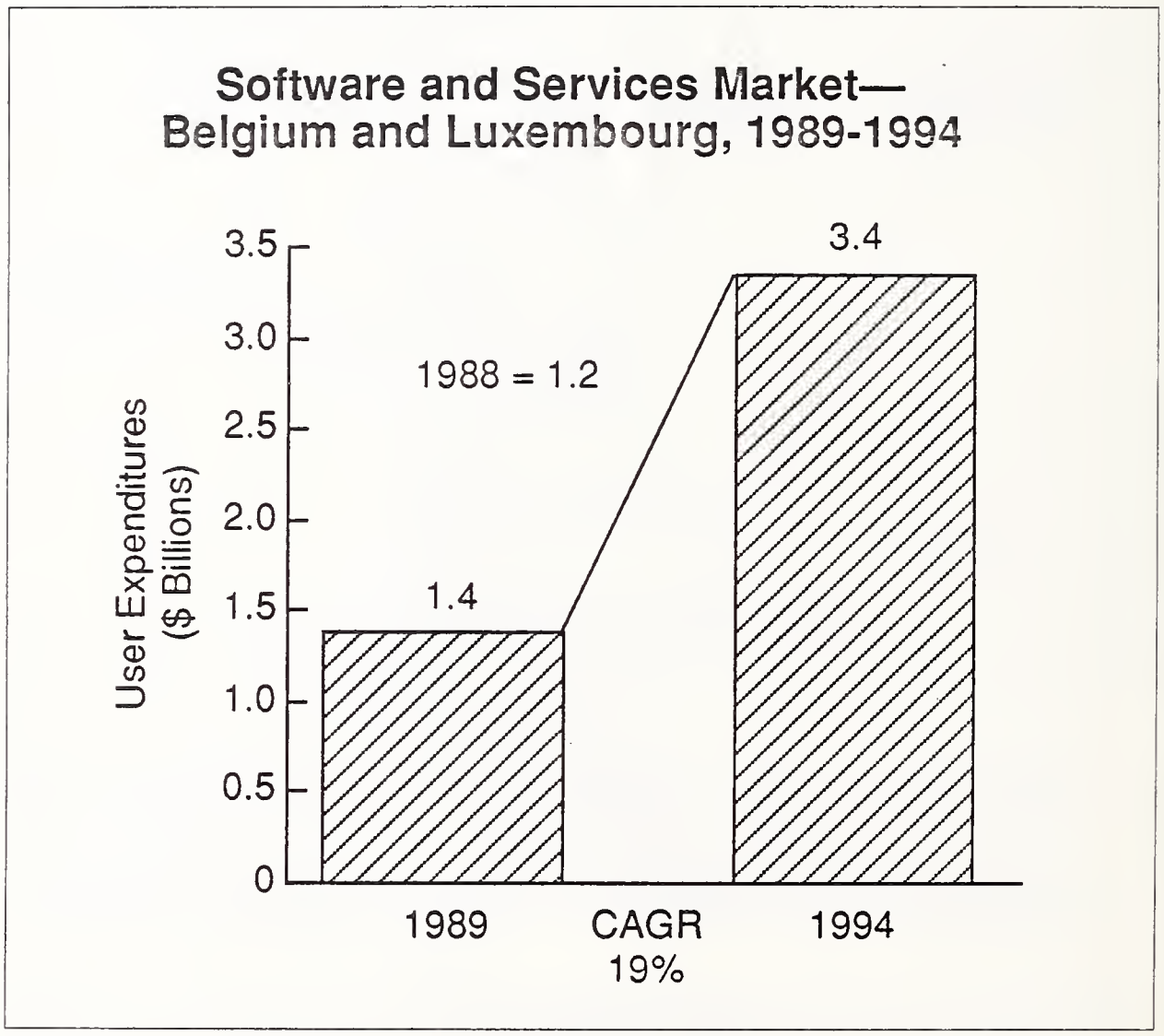
6. Belgium and Luxembourg

The Duchy of Luxembourg is traditionally considered to be part of the Belgian market. Exhibit VI-31 shows the growth of the Belgian and Luxembourg software and services markets from 1989 to 1994. INPUT forecasts that these markets should show an average combined growth of 19 percent over this period. Exhibit VI-32 gives the breakdown of the market by delivery mode. Professional services is the leading delivery mode.

EXHIBIT VI-31



Belgium has undoubtedly benefited economically from the position of Brussels as "capital" of the EEC INPUT is forecasting a 19 percent average growth rate for the Belgian software and services market between 1989 and 1994.

The European Commission has already developed a host electronic information service, ECHO. This is located in Luxembourg, and currently has some 20 databases available, mostly only on a test basis. Run by DG XIII, ECHO offers on-line training services, and also organises some 100 events a year, such as exhibitions, presentations,

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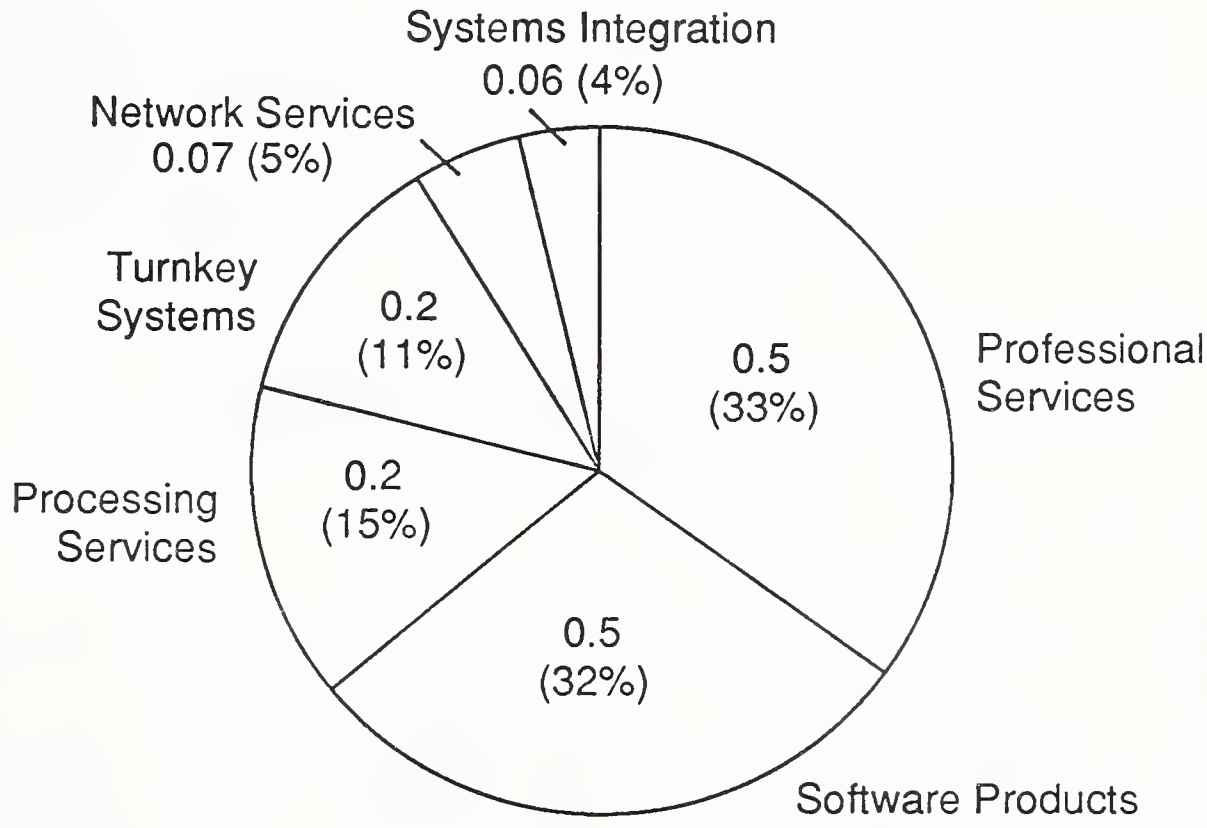
EXHIBIT VI-32

Software and Services Market by Delivery Mode—Belgium and Luxembourg, 1989



Total 1989 Market: $1.4 Billion

demonstrations and face-to-face training. It has a permanent help-line staff to resolve user problems, and encourages written enquiries.

In Brussels, DG XIII has established the EDIFACT Board, which is at the centre of developing internationally accepted EDI message standards. In 1988, U.S. representatives joined with EEC experts to push EDIFACT as the North Atlantic EDI standard. Regular working groups are held in Brussels, under the control of DG XIII through its TEDIS organisation.

As in the Netherlands, the leading Belgian vendor is a domestic independent, rather than IBM. CIG-Intersys was formed in 1988 by a merger of the two largest Belgian vendors. Both the Dutch from the north and the French from the south have significant shares in the Belgian information services market.

As Exhibit VI-33 illustrates, the top five European vendors account for some 17 percent of the total information services market in Belgium, whilst U.S. vendors account for about 15 percent. It is very likely that the involvement of U.S. vendors will increase, as many U.S. companies are

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EXHIBIT VI-33

Top Vendor Rankings and Market Shares—Belgium and Luxembourg, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	CIG - Intersys	7.5	90
2	Informabel	2.5	30
3	Cap Gemini Sogeti	2.5	30
4	Reuters	2.1	25
5	Volmac	2.1	25
Top U.S. Vendors			
1	IBM	7.1	85
2	GEIS	2.5	30
3	Unisys	2.5	30
4	Computer Science Corporation	1.3	15
5	Prime	0.8	10
Other Vendors		69.2	930
Total		100.0	1,200

considering moving their European headquarters to Brussels so as to stay as close as possible to European developments.

Computer Science Corporation has its European headquarters in Belgium, and in 1988 was one of the major U.S. vendors involved in the Belgian market. In 1989, it acquired CIG-Intersys, and so will now become the largest vendor in Belgium.

As with the Netherlands, the Belgian market is too small to generate large European vendors. With the likely increase in activity around Brussels by foreign vendors, whether U.S. or European, there is a real

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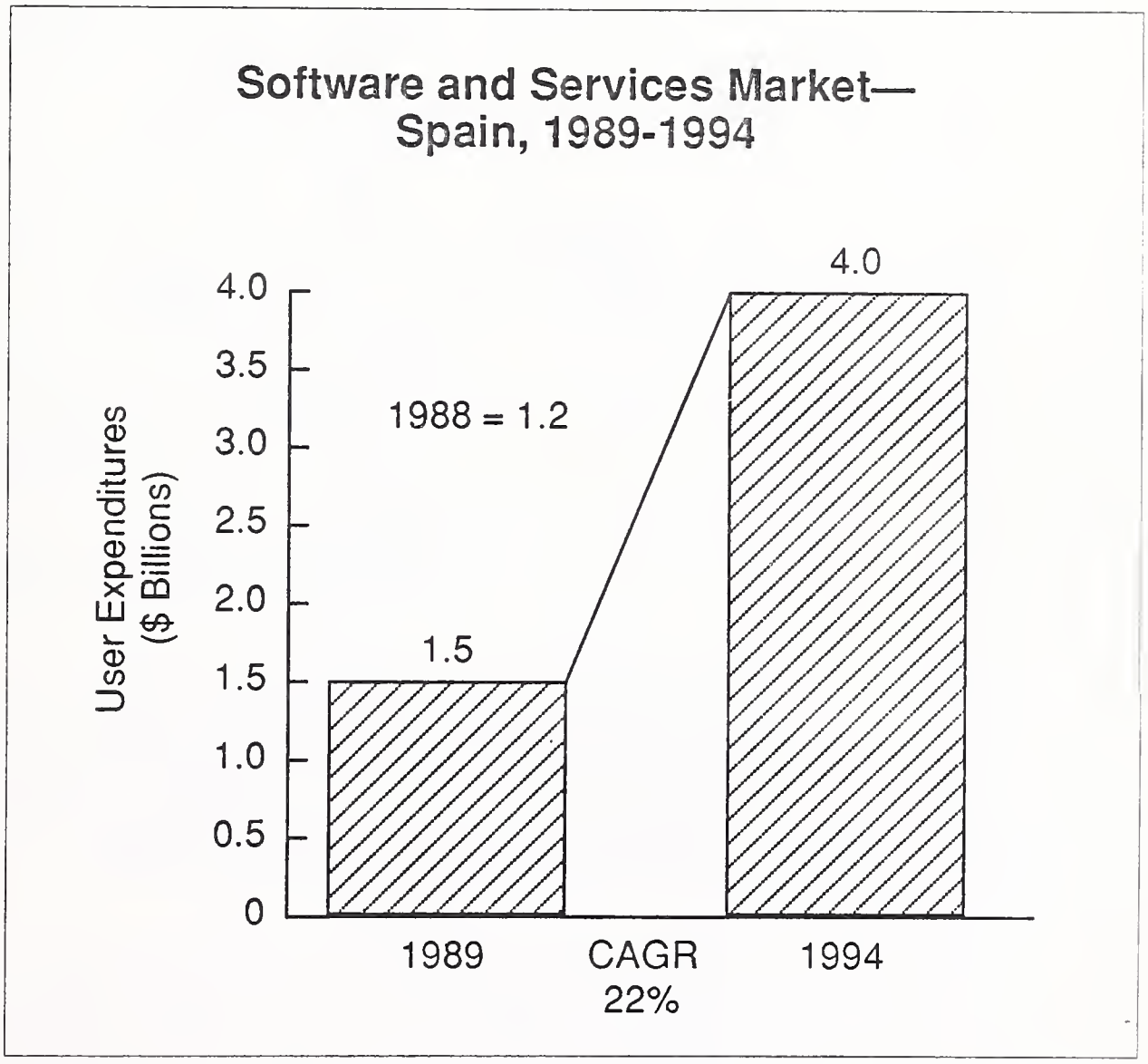
fear that the domestic Belgian software and services industry will get taken over even further by foreign interests.

7. Spain

The Spanish software and services market is forecast by INPUT to have the fastest growth in the EEC at an average rate of 22 percent over the five-year period from 1989 to 1994. Exhibit VI-34 illustrates how INPUT expects the overall market to develop, and Exhibit VI-35 gives a breakdown by delivery mode.

EXHIBIT VI-34



The structure of the Spanish information services market is geographically similar to that of Italy. The Catalan market, centred in the east around Barcelona, has a predominance of small and medium-sized family businesses. Software and services vendors in this region tend to be similarly structured. The government, the corporate headquarters of international companies, and banks are established in the centre of the country, in Madrid. The large government-controlled software and services vendors are therefore also located in Madrid.

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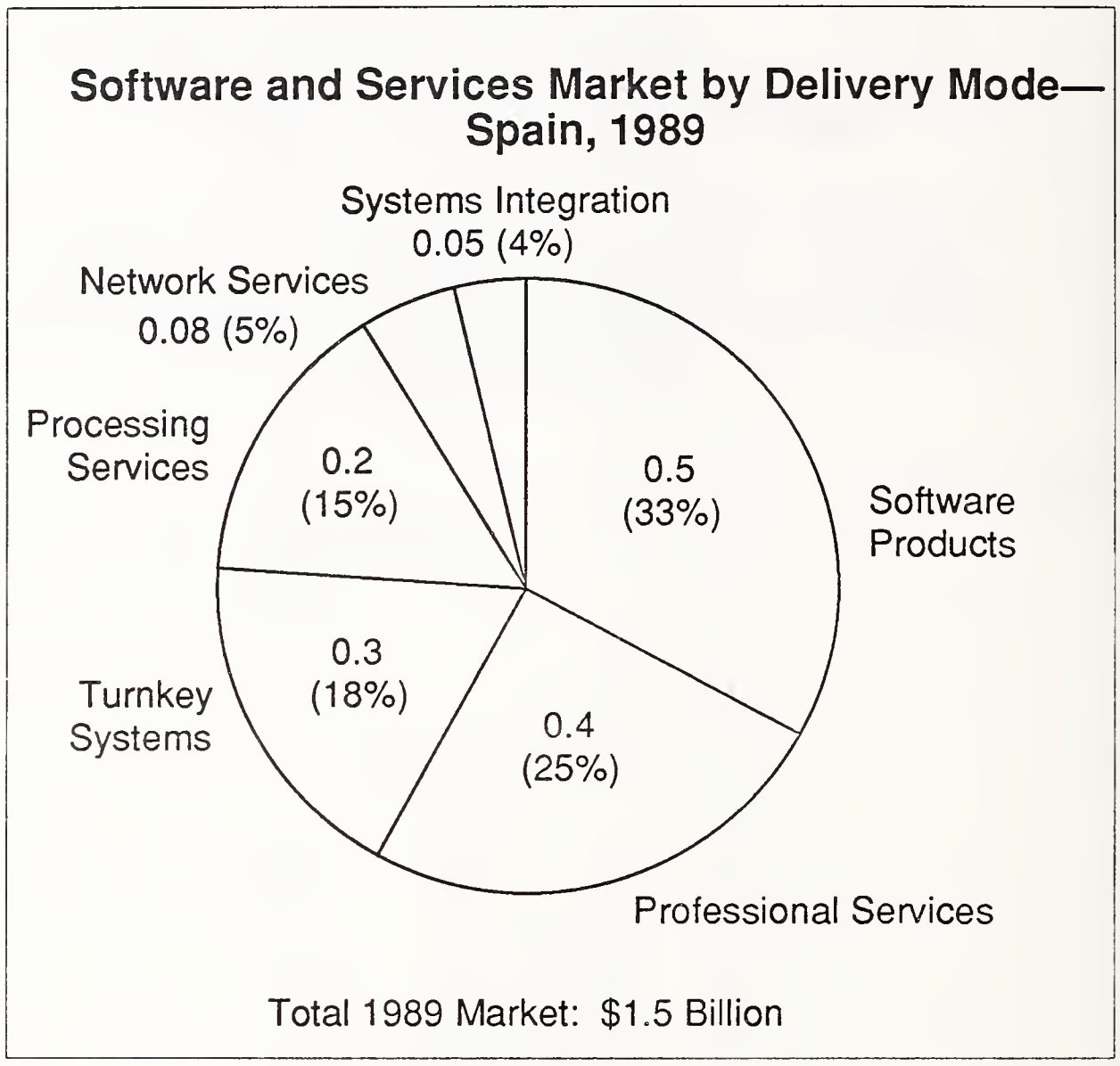
EXHIBIT VI-35



As Exhibit VI-36 illustrates, IBM is by far the largest vendor of software and services in Spain, accounting for some 12 percent of the total market. With no domestically owned equipment vendors, the Spanish equipment market has become dominated by IBM, which has built up significant volumes of software and services in Spain.

Many of the larger vendors in Spain have links to French vendors. France has viewed Spain as a natural extension of its domestic market for a number of years. French vendors have expanded into Spain through acquisitions. The only large Spanish vendors are state-owned and will not feature on the broader EEC scene, as their market is to supply services to Spanish government organisations.

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EXHIBIT VI-36

Top Vendor Rankings and Market Shares—Spain, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Nixdorf	7.9	95
2	CISI	3.3	40
3	Ibermatica	2.5	30
4	Sema	2.5	30
5	Eria	2.1	25
Top U.S. Vendors			
1	IBM	11.7	140
2	Unisys	3.3	40
3	Andersen	2.9	35
4	GEIS	1.7	20
5	NCR	1.3	15
Other Vendors		60.8	730
Total		100.0	1,200

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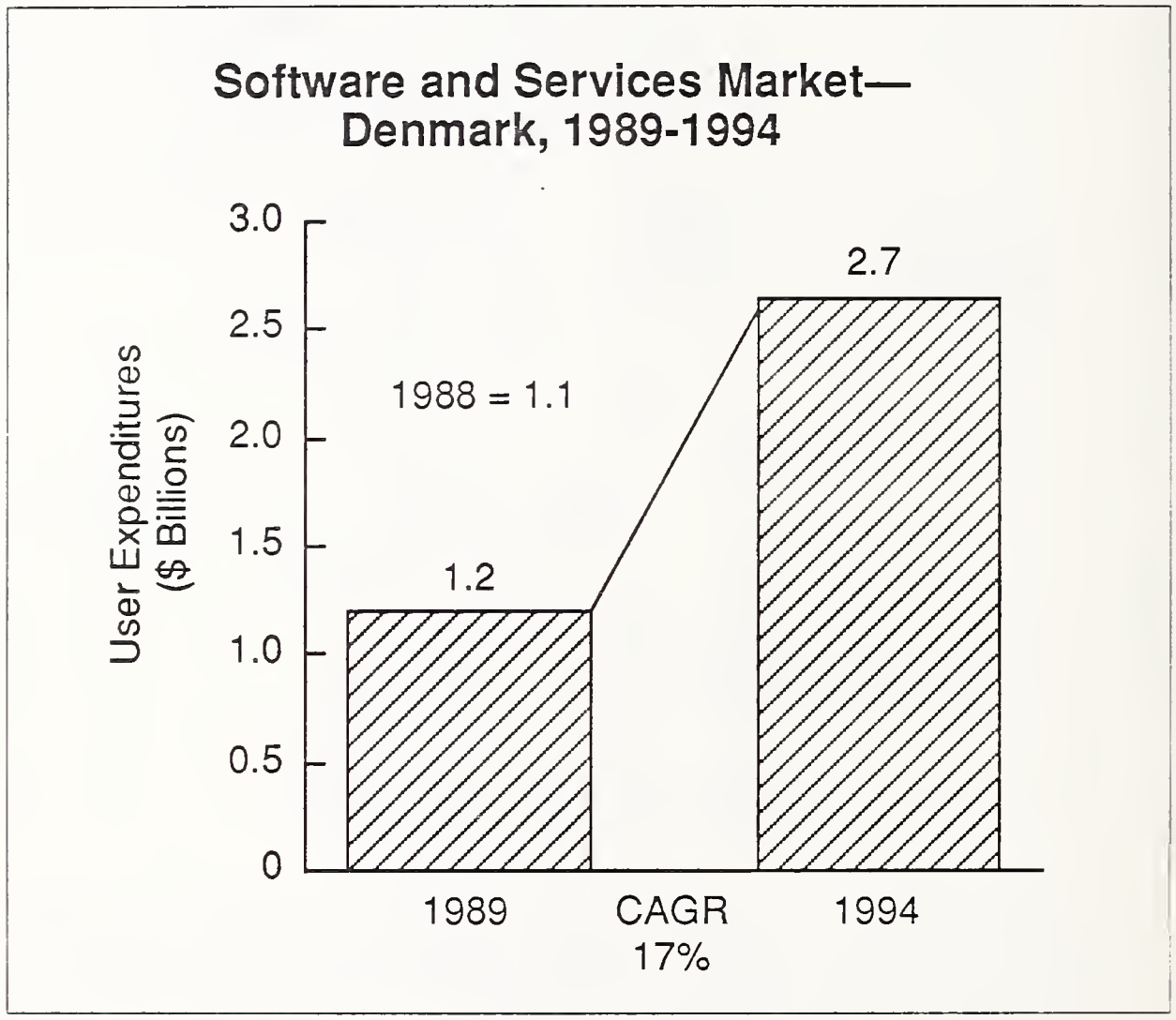
8. Denmark

Exhibit VI-37 illustrates INPUT's forecast for the Danish software and services market over the period 1989 to 1994. The breakdown by delivery mode is shown in Exhibit VI-38.

EXHIBIT VI-37



The leading European vendors in the Danish market are domestic Danish companies and German vendors, as Exhibit VI-39 illustrates. As in the other smaller EEC countries, IBM is not the overall leading software and services vendor, but is the largest U.S. vendor.

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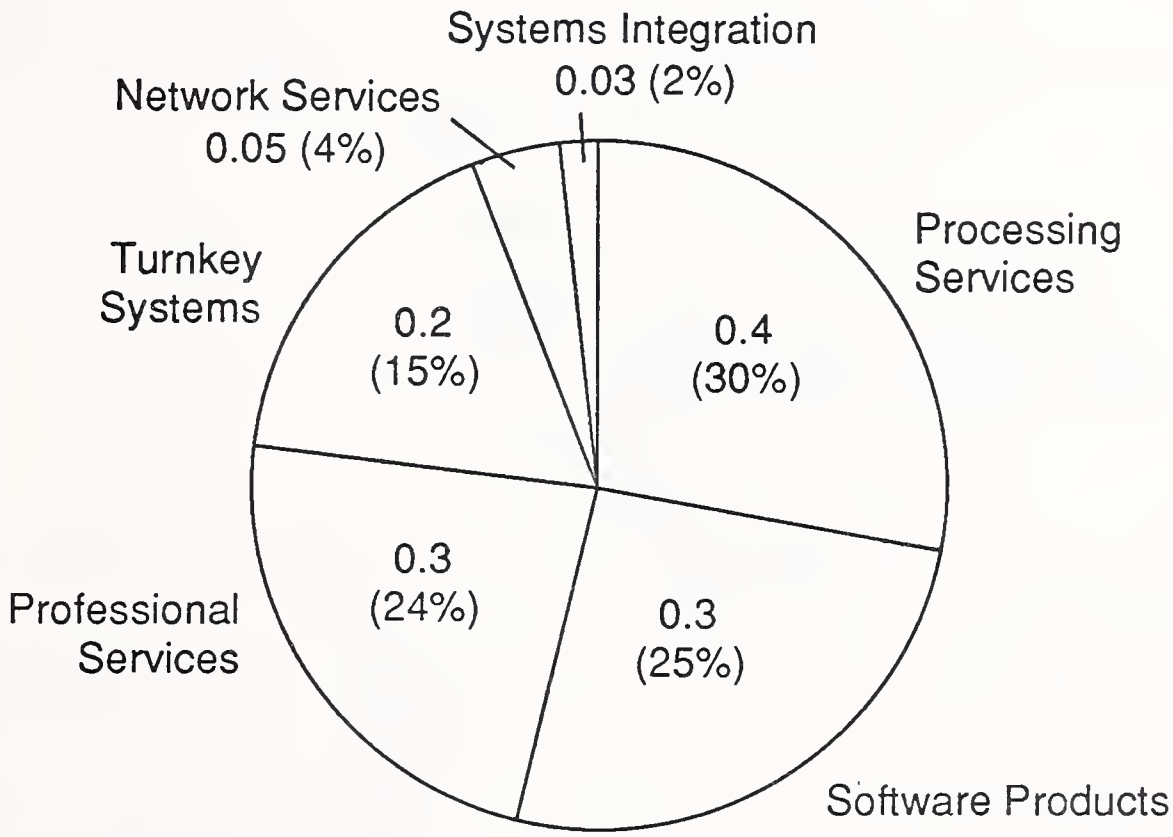
EXHIBIT VI-38

Software and Services Market by Delivery Mode—Denmark, 1989



Total 1989 Market: $1.2 Billion

Denmark is the only Scandinavian country in the EEC. It still maintains its traditional links with the other three Scandinavian countries, with the result that vendors such as Nokia Data and Norsk Data are active in the Danish market. In 1988, Scantel was formed between one of the two Danish PTTs and the PTTs in the other three Scandinavian countries. Scantel will offer international network and VAN services.

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EXHIBIT VI-39

Top Vendor Rankings and Market Shares—Denmark, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Kommunedata	12.7	140
2	Datacentralen	11.8	130
3	PBS	7.3	80
4	Landbruget	3.6	40
5	Nixdorf	3.2	35
Top U.S. Vendors			
1	IBM	9.5	105
2	NCR	3.2	35
3	Unisys	0.9	10
4	GEIS	0.9	10
5	Oracle	0.9	10
Other Vendors		45.9	505
Total		100.0	1,100

Denmark also has a land border and very close links with West Germany. For West German vendors in the north, the Danish market is considerably closer than the southern German states. Denmark is therefore a natural market for German vendors to look to, as Spain has become for the French. If the EEC slowly puts up external barriers to EFTA countries as some fear, then the traditional Danish links with the rest of Scandinavia will get weaker.

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9. Greece, Ireland and Portugal

The three smallest EEC software and services markets account for only some 1 percent of the overall EEC software and services market. These markets are small, with strong involvement by U.S. vendors and their EEC neighbours.

Exhibit VI-40 illustrates INPUT's forecasts for the growth of these three markets over the period 1989 to 1994, and Exhibit VI-41 shows the breakdown by delivery mode for 1989.

EXHIBIT VI-40

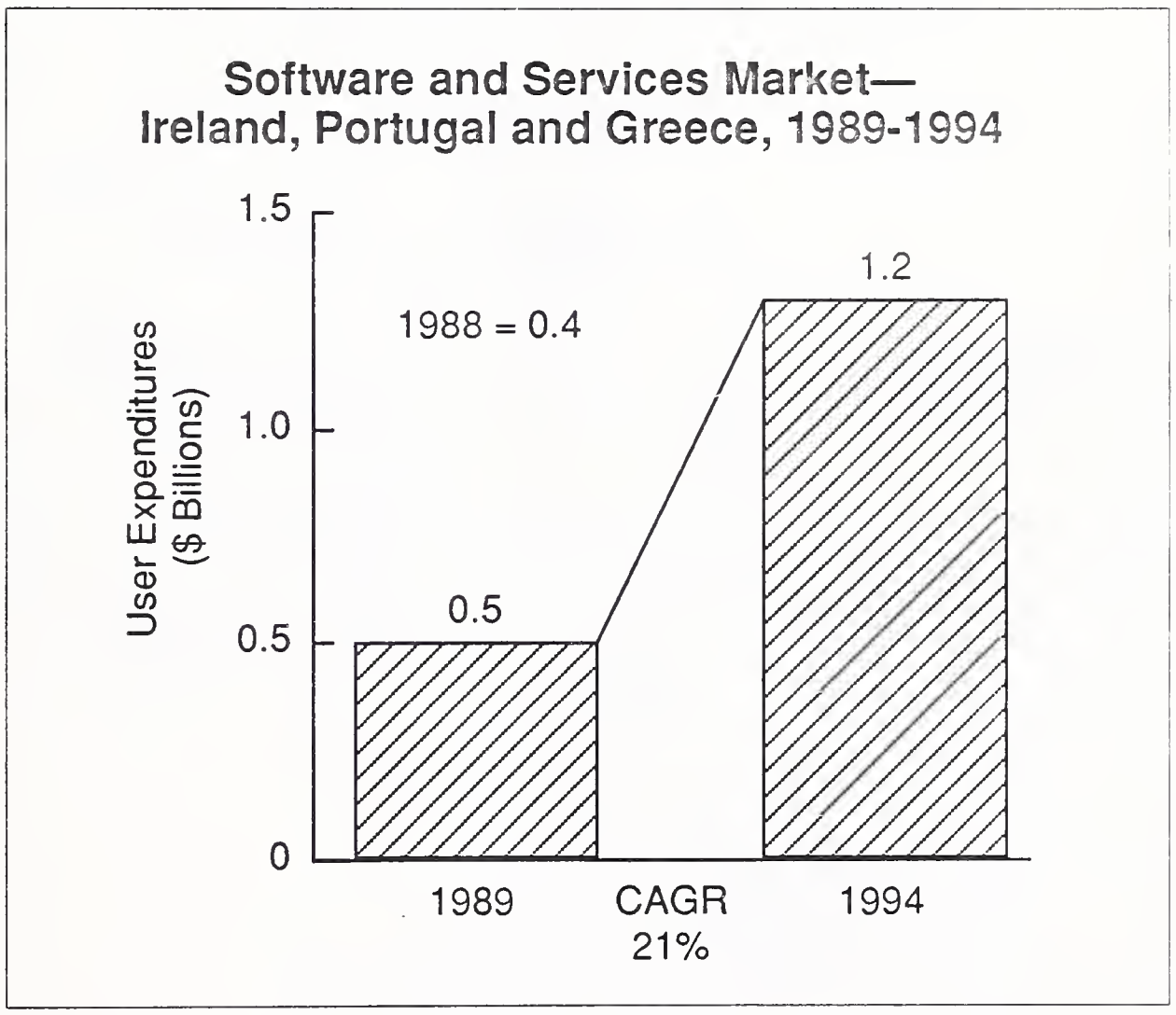

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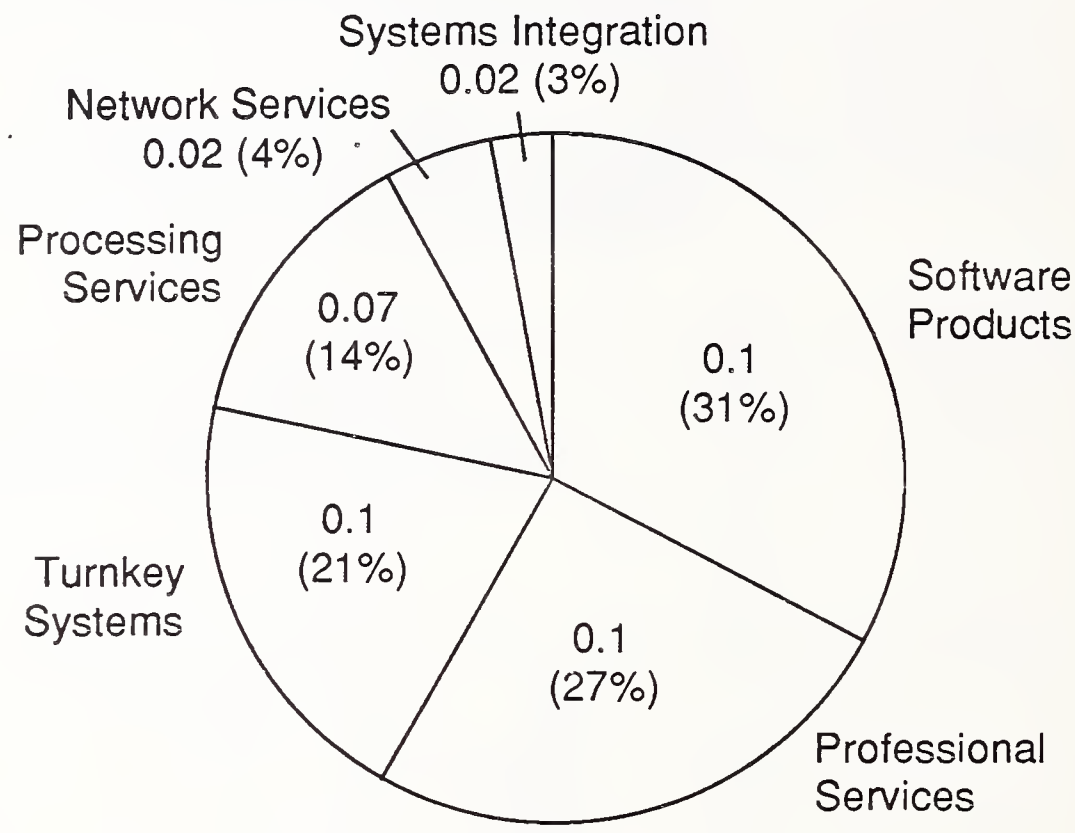
EXHIBIT VI-41

Software and Services Market by Delivery Mode—Ireland, Portugal and Greece, 1989



Total 1989 Market: $0.4 Billion

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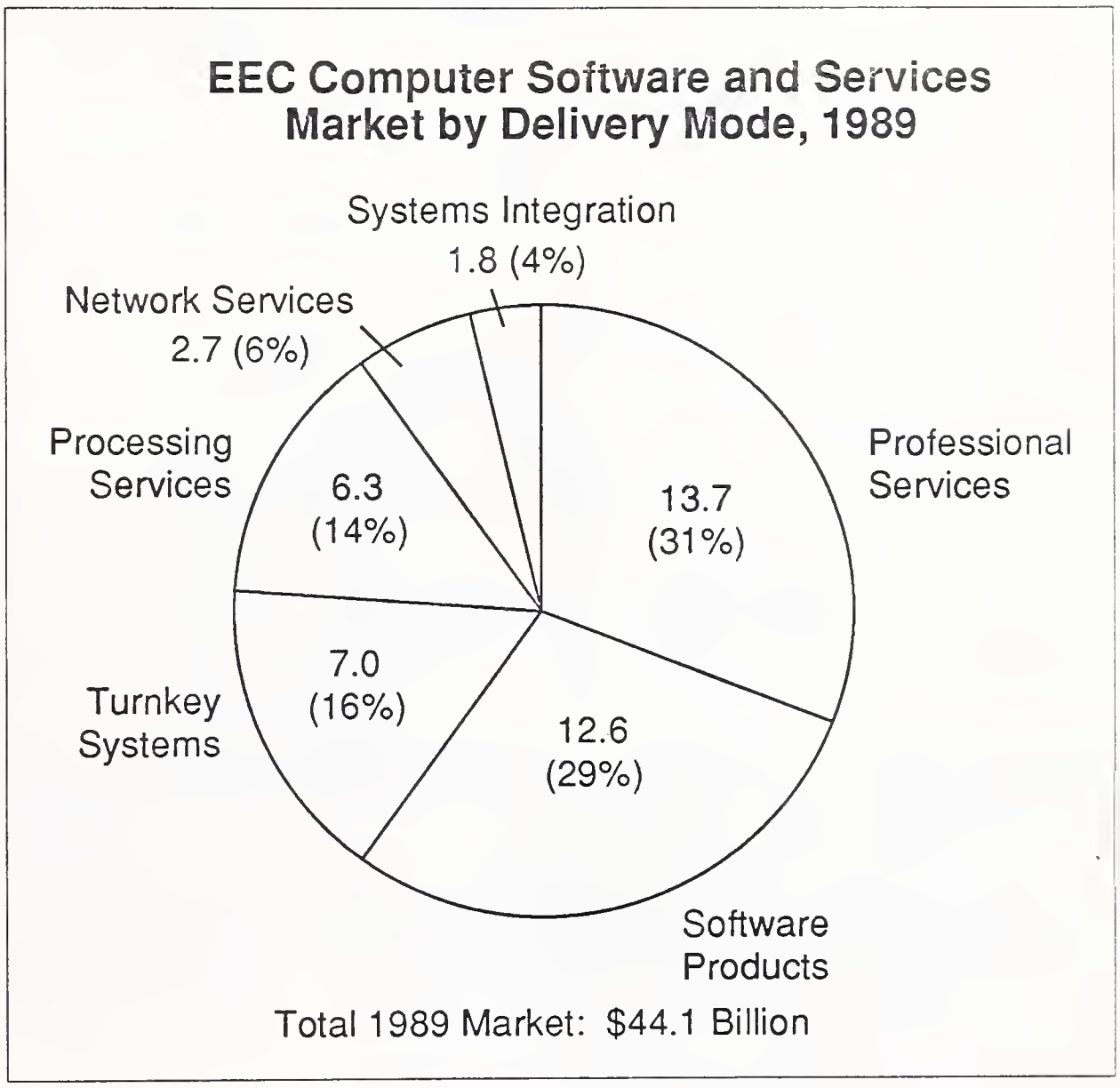
E

Market Sectors

The types and nationalities of vendors in different EEC software and services markets tend to be very different. Exhibit VI-42 illustrates the total EEC software and services market broken down into the six delivery modes defined by INPUT. Professional services is the most important, representing some 31 percent of the total EEC market, with software products accounting for 29 percent.

EXHIBIT VI-42



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1. Processing Services

Exhibit VI-43 shows INPUT's forecast that the EEC processing services market is expected to grow by only 6 percent over the period 1989 to 1994. France is the largest country market for processing services, followed by West Germany and the U.K., as depicted in Exhibit VI-44.

EXHIBIT VI-43

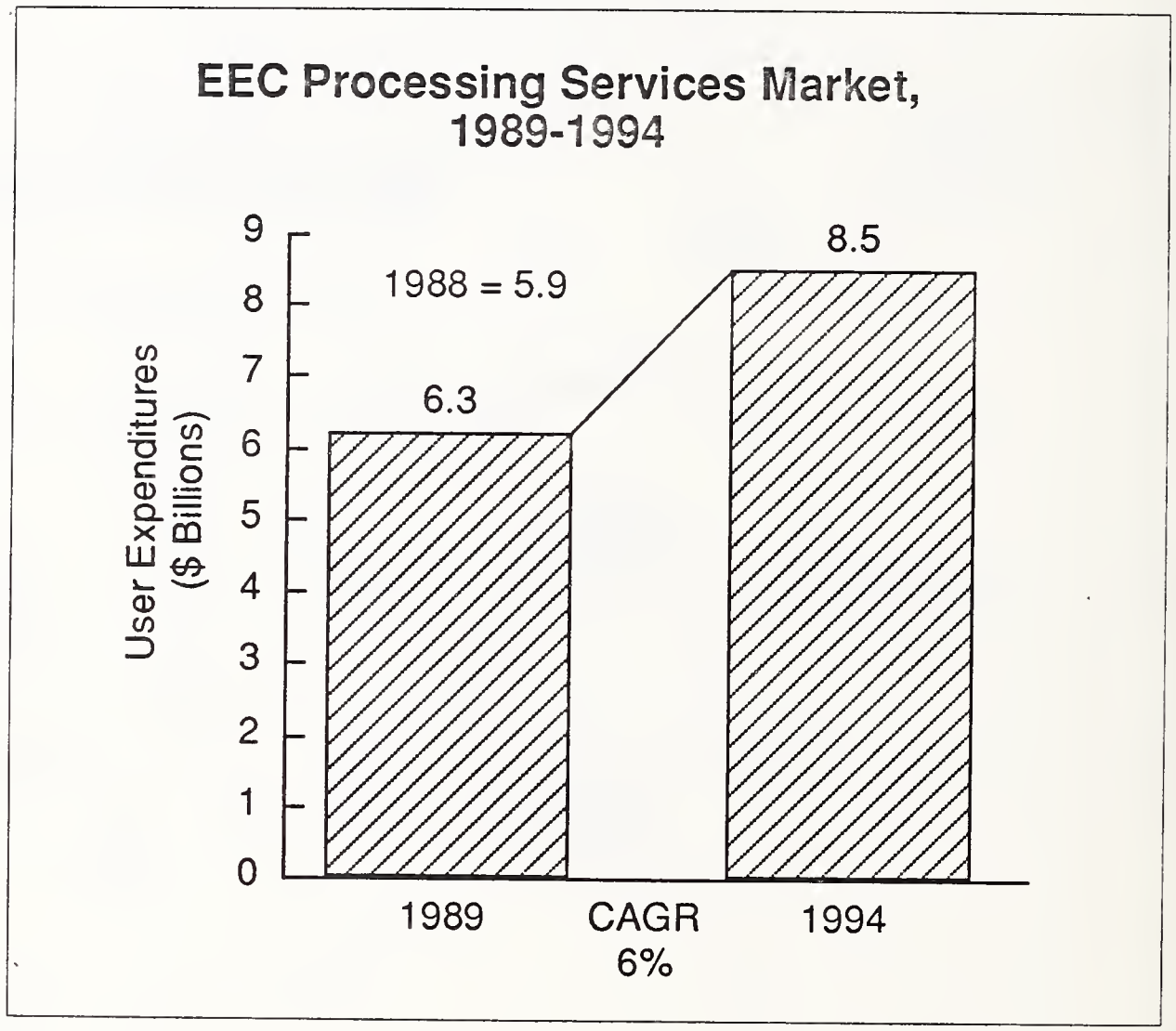

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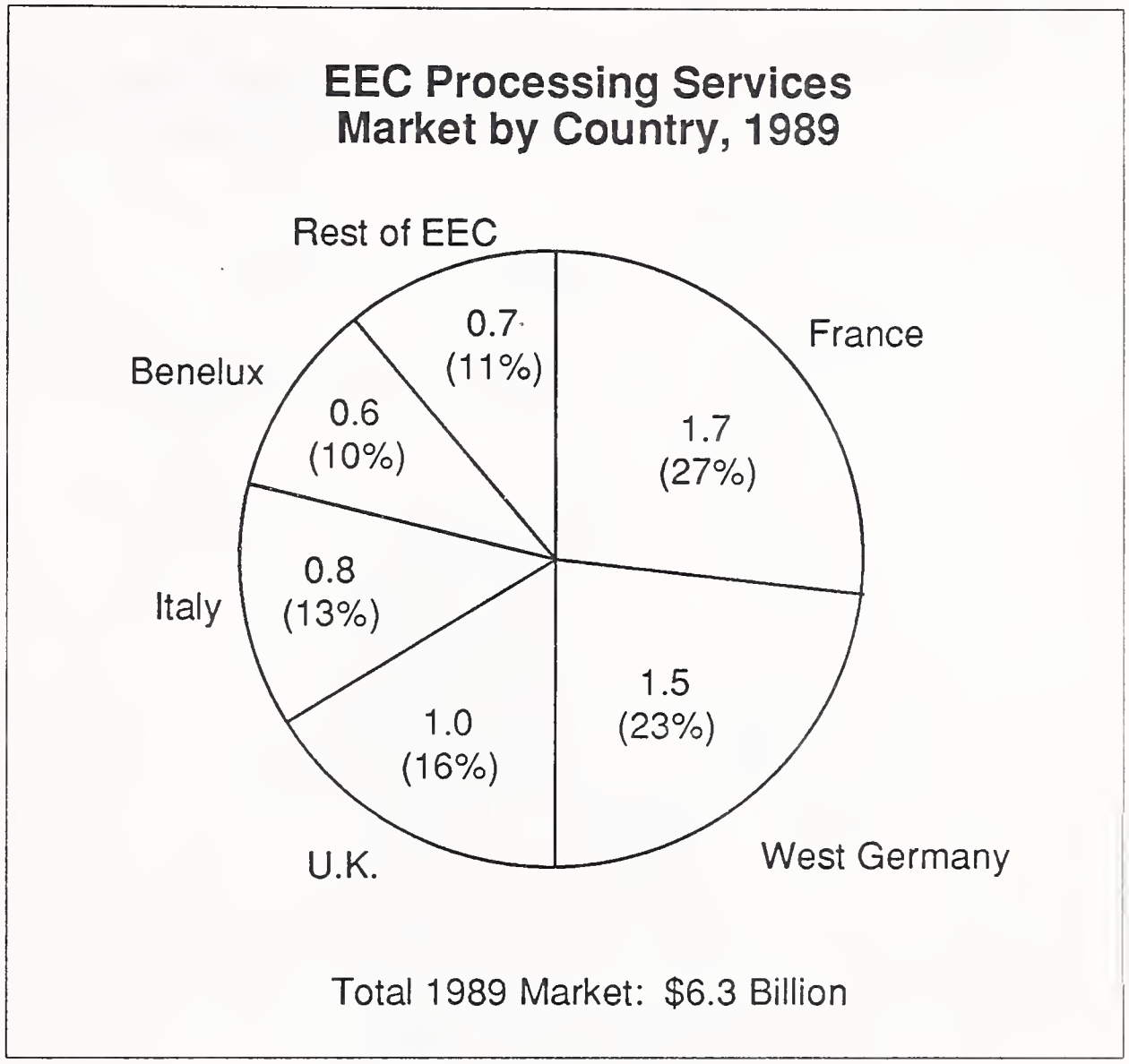
EXHIBIT VI-44



The processing market is made up of a large number of medium to small vendors, as shown in Exhibit VI-45. The top ten vendors only account for some 22 percent of the total market. The Italian state-owned Finsiel Group is the largest European vendor, providing all its processing services to the Italian market. Similarly, the second-largest European vendor, Datev, the German cooperative, supplies all its services to domestic German end users.

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EXHIBIT VI-45

Top EEC Vendor Rankings and Market Shares—Processing Services, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Finsiel	3.8	225
2	Datev	3.4	200
3	Sligos	1.4	85
4	GSI	1.4	85
5	Fiducia	1.2	70
Top U.S. Vendors			
1	IBM	4.0	235
2	GEIS	3.8	225
3	EDS	1.5	90
4	NCR	0.5	30
5	ADP	0.5	30
Other Vendors		78.4	4,625
Total		100.0	5,900

2. Network Services

Exhibit VI-46 illustrates that network services is forecast to grow by 24 percent over the period 1989 to 1994, the second-fastest growth rate of INPUT's six delivery modes. As Exhibit VI-47 shows, the major country market for network services in the EEC is the U.K., accounting for 34 percent of the total. In areas like EDI, the U.K. is by far the most advanced and largest country market in the EEC.

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EXHIBIT VI-46

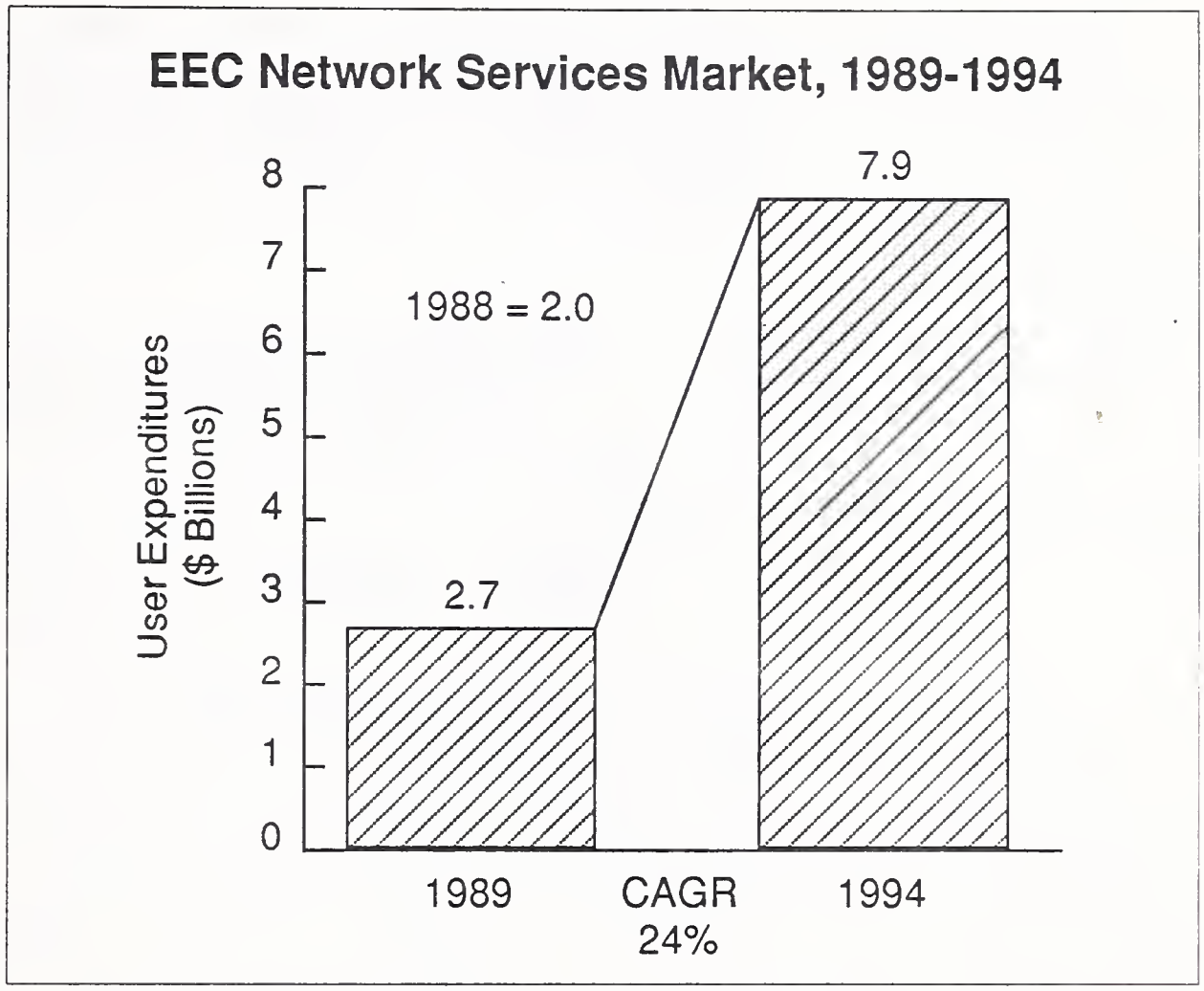
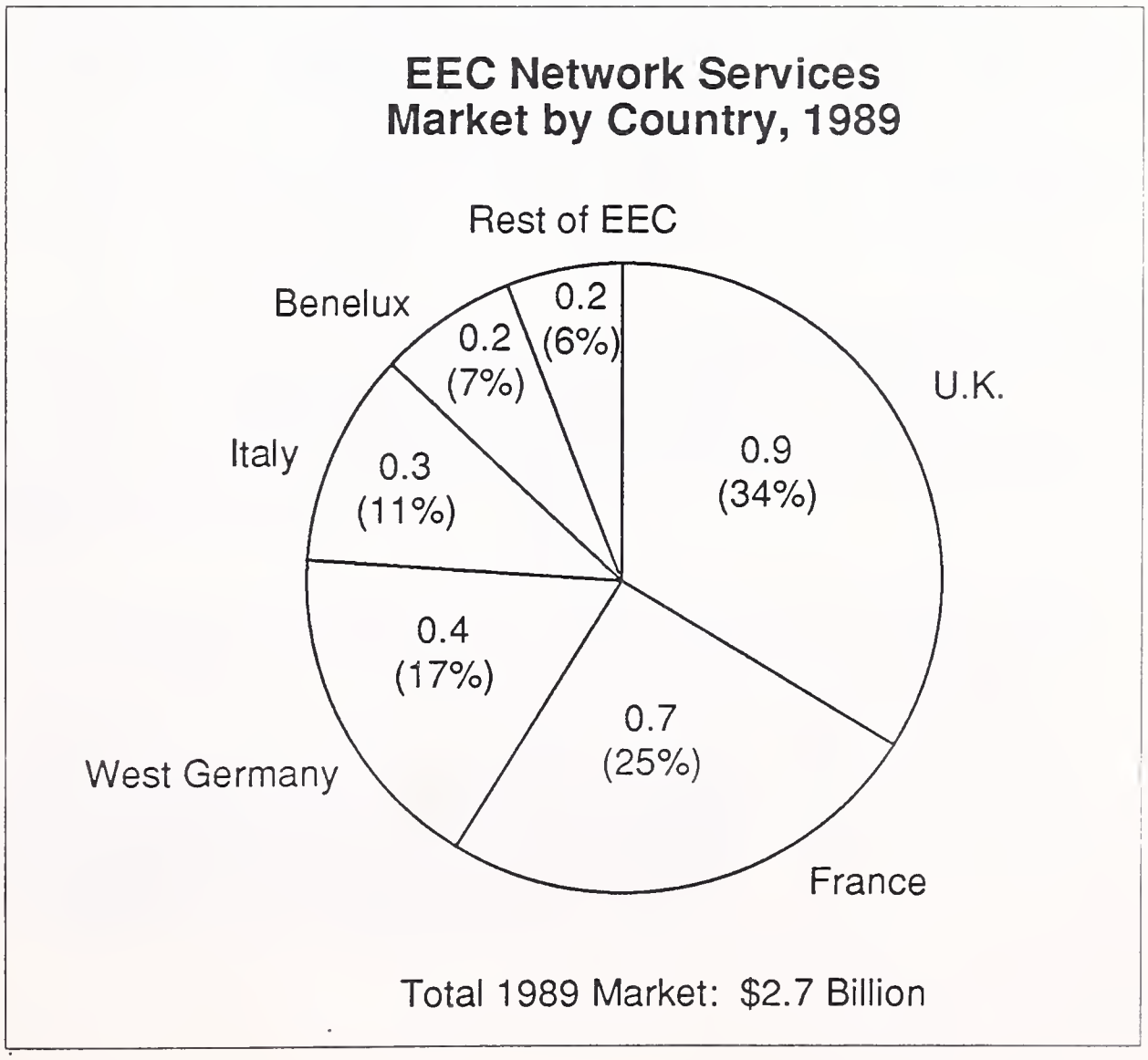


EXHIBIT VI-47



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Reuters, the U.K.-owned electronic information services vendor, is the leading network services vendor. It specialises in on-line financial information services, as does Telerate from the U.S. As Exhibit VI-48 illustrates, the other three leading European vendors in this market are French.

EXHIBIT VI-48

Top EEC Vendor Rankings and Market Shares—Network Services, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Reuters	30.0	600
2	Transpac	4.0	80
3	Sligos	2.0	40
4	GSI	1.8	35
5	Bull	1.5	30
Top U.S. Vendors			
1	GEIS	6.0	120
2	Telerate	5.0	100
3	Dun & Bradstreet	2.2	45
4	IBM	1.5	30
4	Control Data	1.0	20
Other Vendors		45.0	900
Total		100.0	2,000

Transpac sells services principally to the French market. In addition to the end-user revenues shown in this table, it has very significant revenues that are sold to other software and services vendors, such as French videotex information providers and foreign network service vendors wishing to use Transpac's French network.

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Videotex, which was developed in the U.K. under the Prestel standard, has now spread throughout the whole of the EEC. There are currently three prime standards—Prestel (U.K.), Antiope (France) and CEPT (West Germany). Other member states have adopted either the Prestel or CEPT standards, but in all cases have made national modifications. As a result, there are no satisfactory international videotex services in the EEC today.

The most successful videotex service has been in France. By making the French telephone directory only available via Minitel in selected areas, and by giving out Minitel terminals, the French PTT has pushed the number of terminals to about 4.5 million, some 30 times more than any other European country. However, although this has fostered a growing electronic information services industry in France, the cost of continuing this strategy is now being questioned.

GEIS and IBM are the leading European suppliers of pan-European networks. The European PTTs have failed on more than one occasion to develop international network services. In 1988, Computer Sciences Corporation sold 60 percent of INFONET to a consortium of European PTTs. This was seen as a real opportunity for the Europeans to compete against U.S. vendors. However, little benefit has yet been realised from this.

The European Commission has attempted to actively support European network vendors in a number of EEC-funded projects. However, to realise these in a realistic time frame, it has had to drop the condition that the network be European-owned. It seems that there is little chance of European vendors breaking the stranglehold that U.S. vendors have on the managed network services market, in the early 1990s. The Europeans do have a good foothold in the electronic information services industry.

As discussed in the section above on Belgium and Luxembourg, the EEC under DG XIII has established its own electronic information service, the European Commission Host Organisation or ECHO. Located in Luxembourg, ECHO currently holds some 20 databases, many on just a trial basis at the moment. Its clients have already grown from 1,200 in 1985 to 5,000 in 1989.

ECHO can be accessed via TTY, videotex and X.25 synchronous terminals. The DIANE-GUIDE database holds details on some 900 European databases and 90 host services. The TED (Tender Electronic Daily) database lists public tender information for EEC member states, and PABLI (Pages Bleues Informatisées) has details on EEC development projects. Many of ECHO's databases are being developed by different Directorate Generals, and aim to maintain an up-to-date status on specific Single European Act developments.

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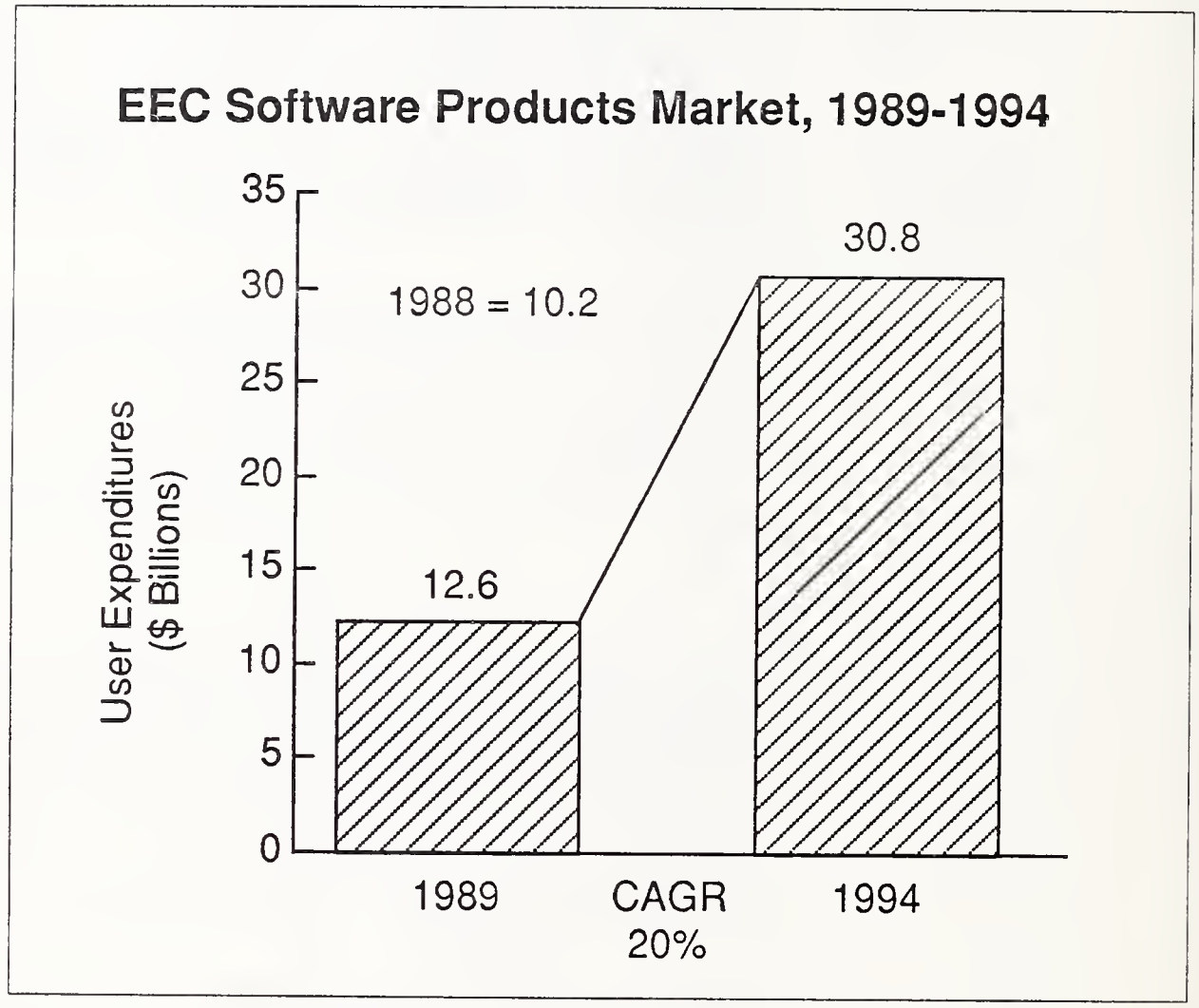
3. Software Products

INPUT forecasts that the EEC software products market will grow by an average of 20 percent over the period 1989 to 1994, as Exhibit VI-49 illustrates. France is the largest national market for software products, accounting for 27 percent of the total EEC market, as is shown in Exhibit VI-50.

EXHIBIT VI-49



As Exhibit VI-51 illustrates, the largest software products vendors are equipment vendors—IBM, Siemens, Bull, Unisys, ICL, Digital. Most of the software products sold by these equipment vendors are systems software. Two of the leading independent vendors—U.S.-owned Computer Associates and Software AG from West Germany—are also very strong in systems software.

Major application software vendors have the choice as to whether to deliver their applications as software products or as turnkey systems. There are many thousands of vendors selling application software in the EEC; most are European vendors targeting very specific national niche markets.

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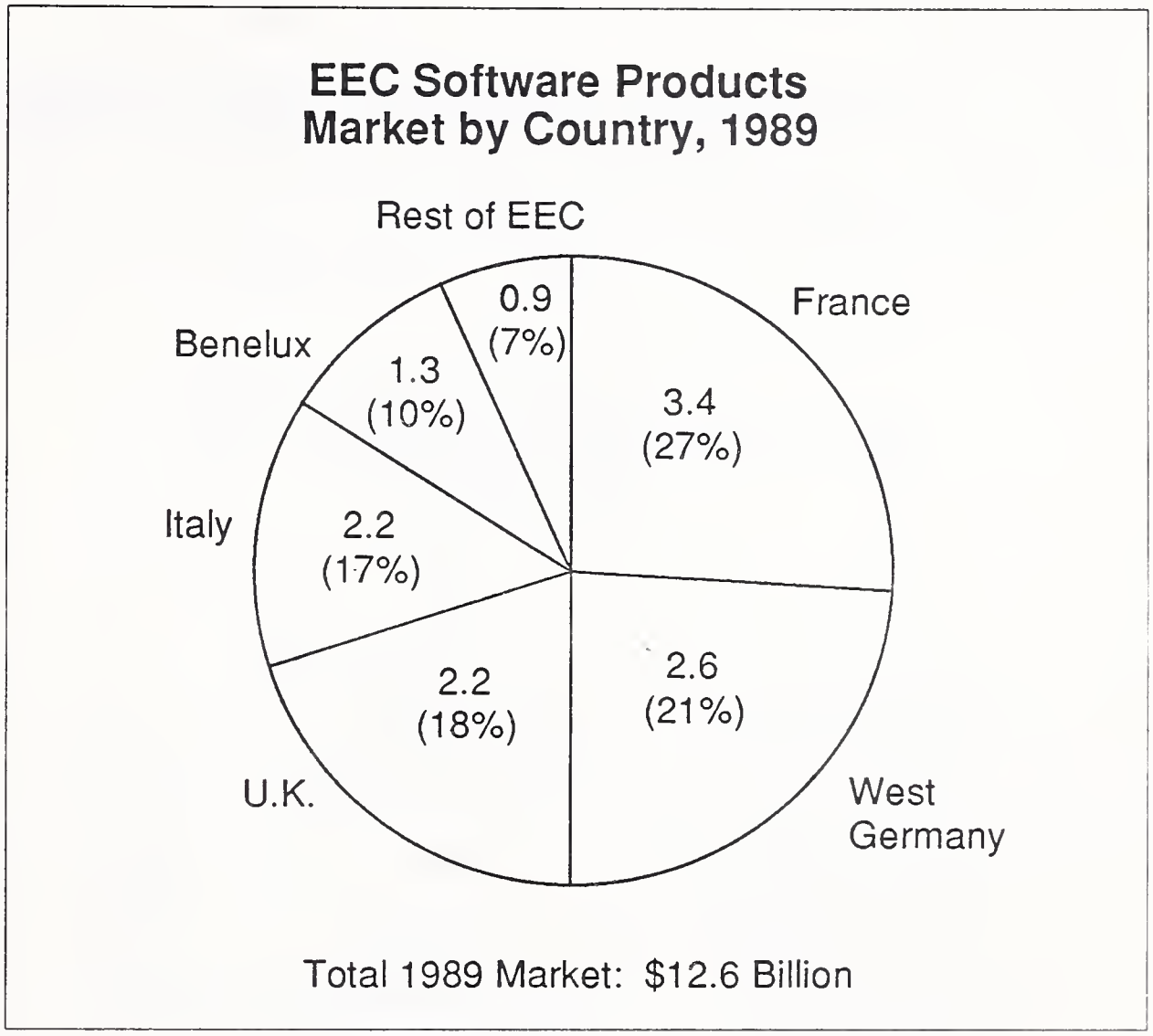
EXHIBIT VI-50



The EEC software products markets for systems and applications software are therefore very different. Out of the total software products market, system software represents some 60 percent, or some $7.6 billion, whilst application software represents the remaining 40 percent, or $5 billion.

System software markets are often pan-European and so have been targeted by equipment vendors and U.S. vendors, whether equipment or independent vendors. IBM alone controls some 18 percent of the total EEC software products market, and probably around 25 percent of the systems software products sector. Apart from a few major European independent vendors like Software AG, European independents do not have a major stake in the systems software market.

The applications software market can be split into those that are pan-European—CAD/CAM, PC packages for word processing, spreadsheets and databases—and those that are designed for specific national niche markets—accounting, tax, and local and national government. Pan-European markets have been targeted by U.S. vendors. CAD/CAM is principally covered by turnkey systems rather than by software products vendors. However, PC application software is predominantly software

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EXHIBIT VI-51

Top EEC Vendor Rankings and Market Shares—Software Products, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Siemens	4.8	490
2	Bull	2.9	300
3	ICL	1.4	145
4	Software AG	1.3	105
5	Reuters	1.0	100
Top U.S. Vendors			
1	IBM	18.2	1,860
2	Unisys	2.1	210
3	Computer Associates	2.0	200
4	Digital	1.1	115
5	Oracle	0.7	70
Other Vendors		64.5	6,605
Total		100.0	10,200

products and is dominated by U.S. vendors—Microsoft, Lotus, Ashton-Tate, and WordPerfect. Most of this PC software is sold via third-party European distributors, and so these vendors do not show up in INPUT's vendor ranking, which lists only end-user revenues.

Application software for national niche markets will be the most affected by the Single European Act. It is here that traditional European barriers have caused the greatest hindrance to vendors exporting. As these barriers are gradually removed, European vendors of applications software products will have the opportunity to expand their markets. As has been discussed, U.S. vendors will also be looking for these opportunities, and may take them by acquiring relevant European vendors in these sectors.

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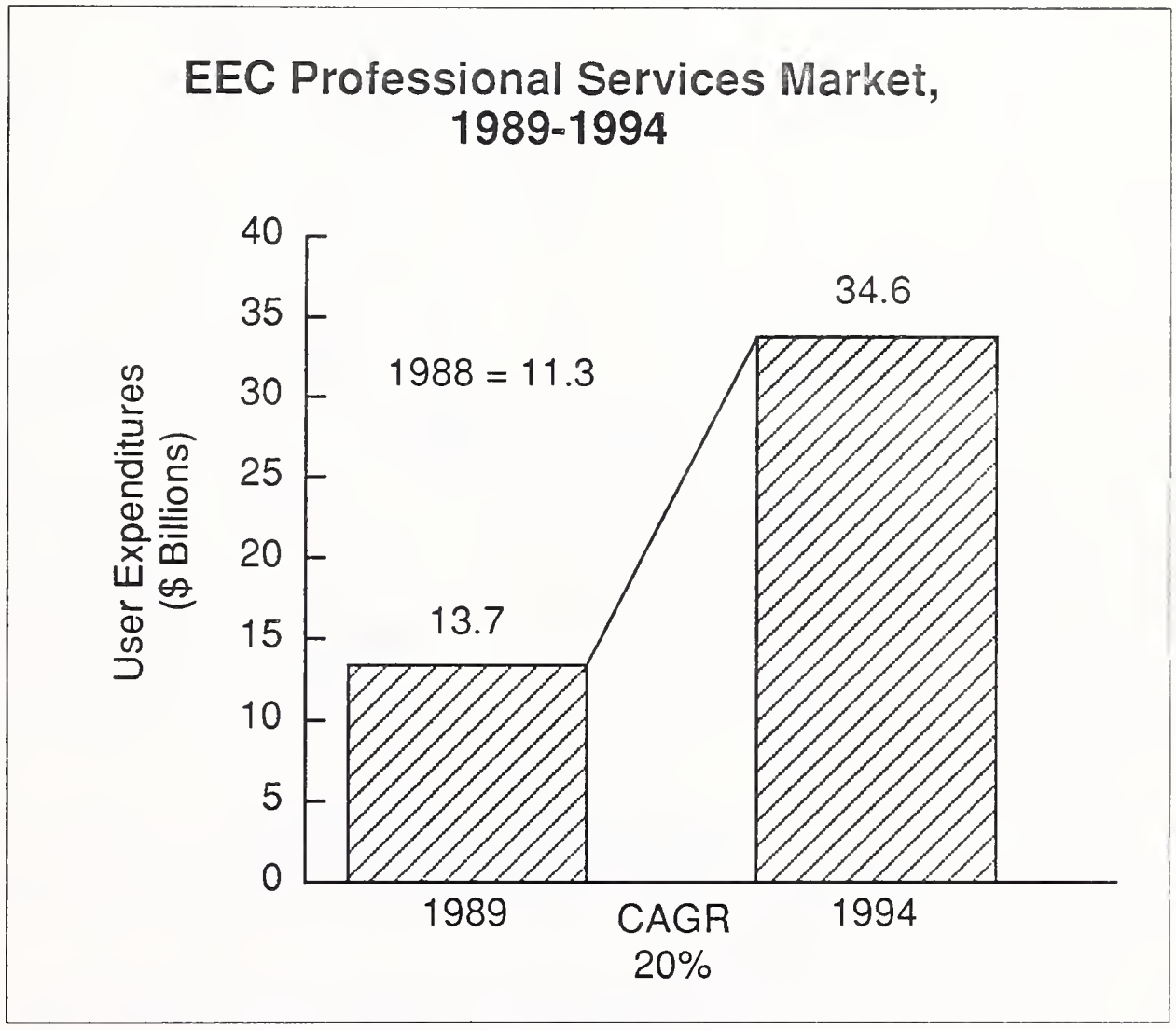
4. Professional Services

Exhibit VI-52 gives INPUT's forecast for the EEC professional services market over the period 1989 to 1994, and Exhibit VI-53 shows the breakdown by EEC member state. France is by far the largest country market for professional services, accounting for 34 percent of the total EEC professional services market.

EXHIBIT VI-52



The EEC professional services market is characterised by over 15,000 very small vendors. Exhibit VI-54 illustrates the importance of the major EEC vendors. French vendors are particularly important—Cap Gemini Sogeti, Sema Group and Bull are all leading vendors. Equipment vendors are equally important, offering consultancy and bespoke software services, as well as equipment.

The professional services market can be split into two prime sectors—consultancy and bespoke software development. End users are looking more for total solutions from vendors. Strategic management consultants find themselves in an ideal position to exploit this growing demand. Culturally, the British and, to a lesser degree, the Americans make the better strategic consultants. One therefore sees large accountancy firms

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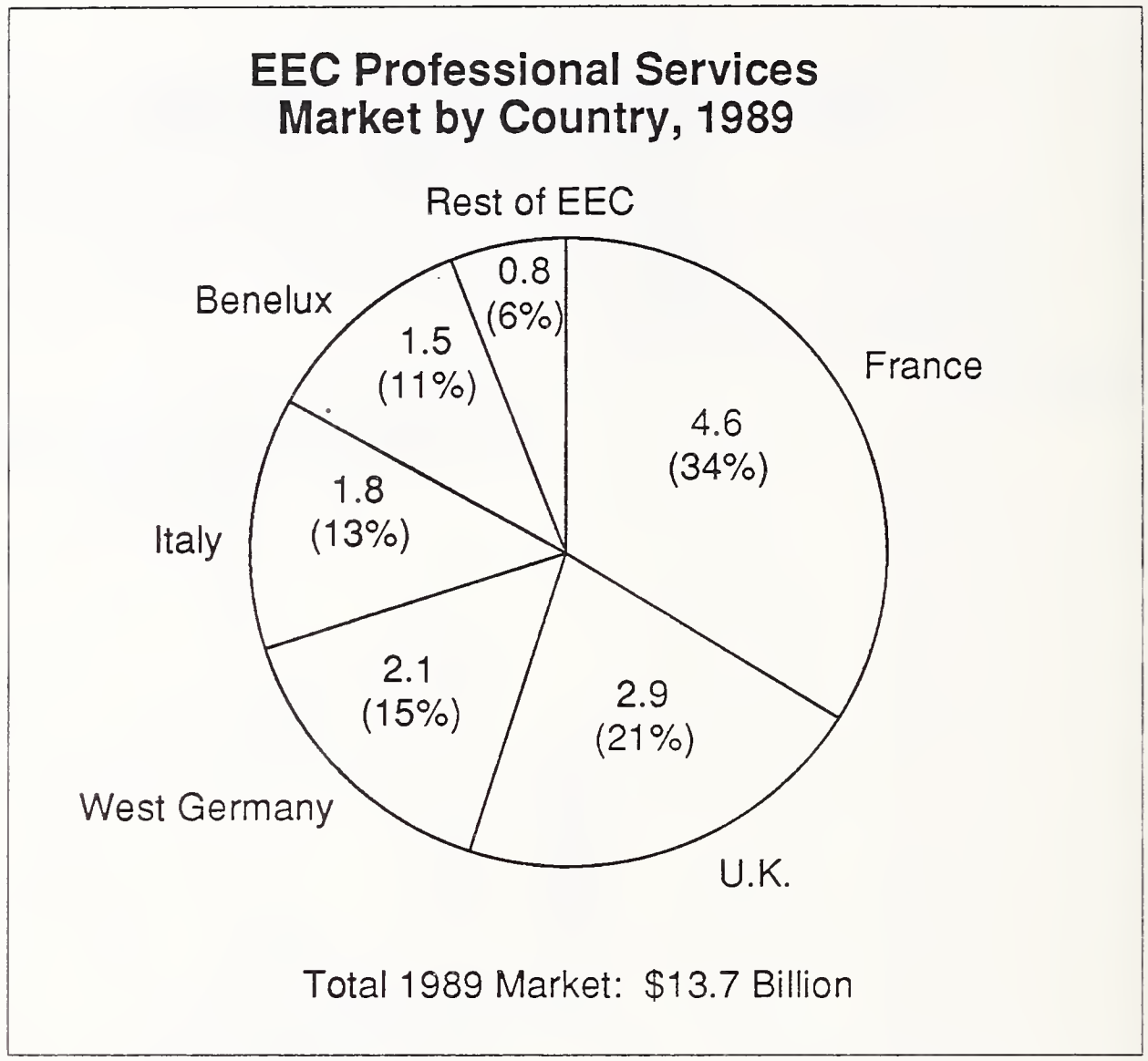
EXHIBIT VI-53



like Andersen, and management consultancy firms like PA and P-E, developing into this sector. Major U.K. professional services vendors such as SD-Scicon and Logica also offer strategic management services.

Bespoke software services need different qualities and skills. The French are very strong in these and France has been the most successful nation to export these services around Europe. In addition to these multinational professional services vendors, each EEC member state has national professional services vendors specialising in providing domestic services to domestic end users.

Traditionally, European vendors have dominated the EEC professional services market. However, there is a trend for these services to be sold more at a strategic level, directly to clients' Board of Directors. U.S. and U.K. vendors have operated at this level more than have some other European professional services vendors in the past. It will be necessary for these vendors to consider modifying their marketing approach in the 1990s to maintain their market position.

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EXHIBIT VI-54

Top EEC Vendor Rankings and Market Shares—Professional Services, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Cap Gemini Sogeti	4.6	520
2	Volmac	2.2	245
3	Finsiel	2.0	225
4	Sema	1.9	220
5	Bull	1.8	205
Top U.S. Vendors			
1	IBM	5.2	585
2	Unisys	1.3	145
3	Digital	1.0	115
4	Andersen	0.8	95
5	Computer Science Corporation	0.6	70
Other Vendors		78.6	8,875
Total		100.0	11,300

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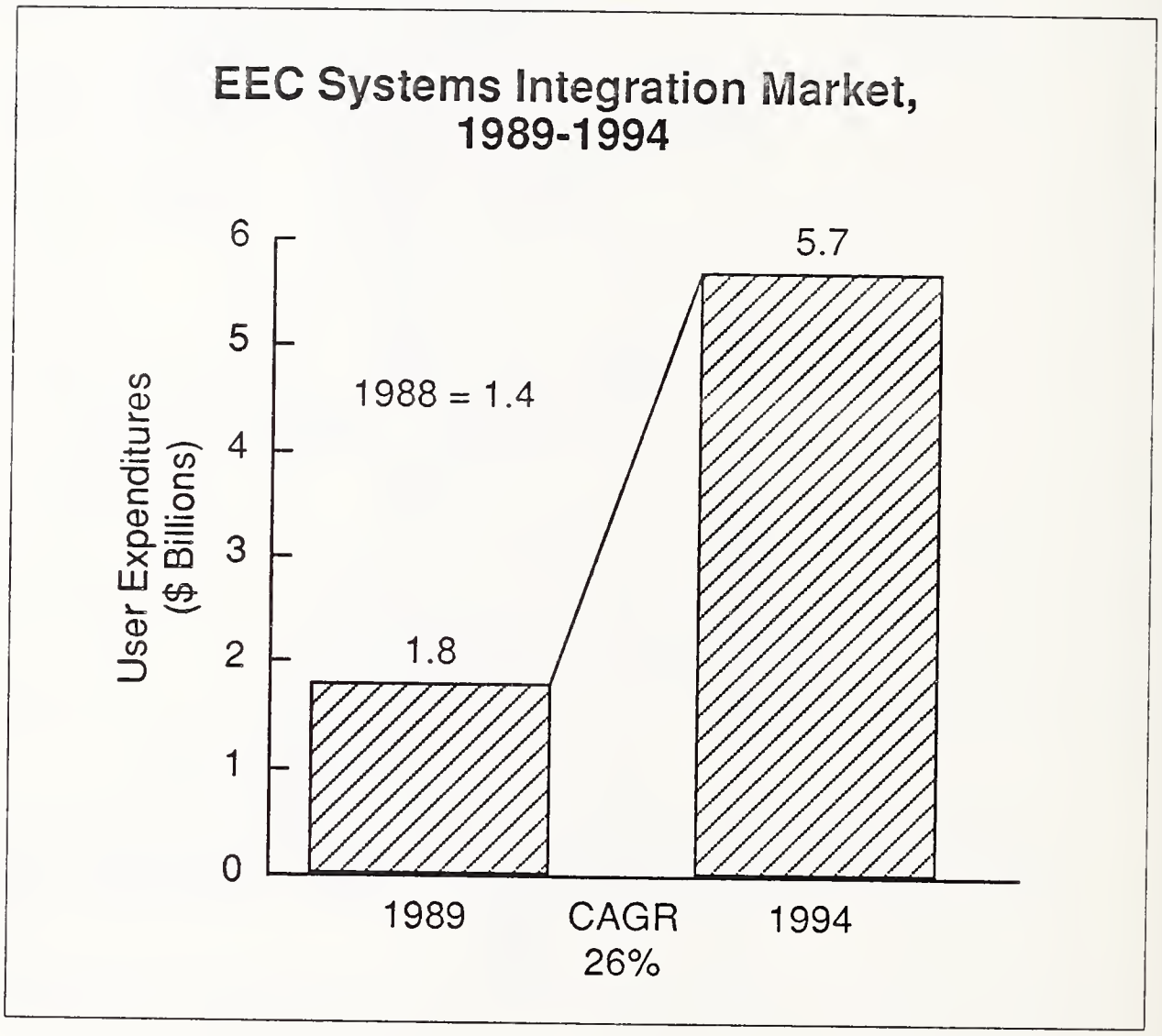
5. Systems Integration

Systems integration generates the smallest revenue of INPUT's six delivery modes. Exhibit VI-55 illustrates that it has the highest forecast growth rate over the period 1989 to 1994—26 percent per annum. As can be seen from Exhibit VI-56, the U.K. is the most important country market.

EXHIBIT VI-55



The systems integration market has been a natural development for the larger professional services vendors. The top vendors in these two delivery modes are very similar, as Exhibit VI-57 illustrates.

Systems integration vendors provide very large total solutions which can consist of total bespoke software. Vendors deliver equipment, software and all other related services. Only large vendors are in a position to offer these services. As the EEC evolves into more of a single market, European systems integration vendors see that they might have the problem of being too small to adequately cover end-user demands.

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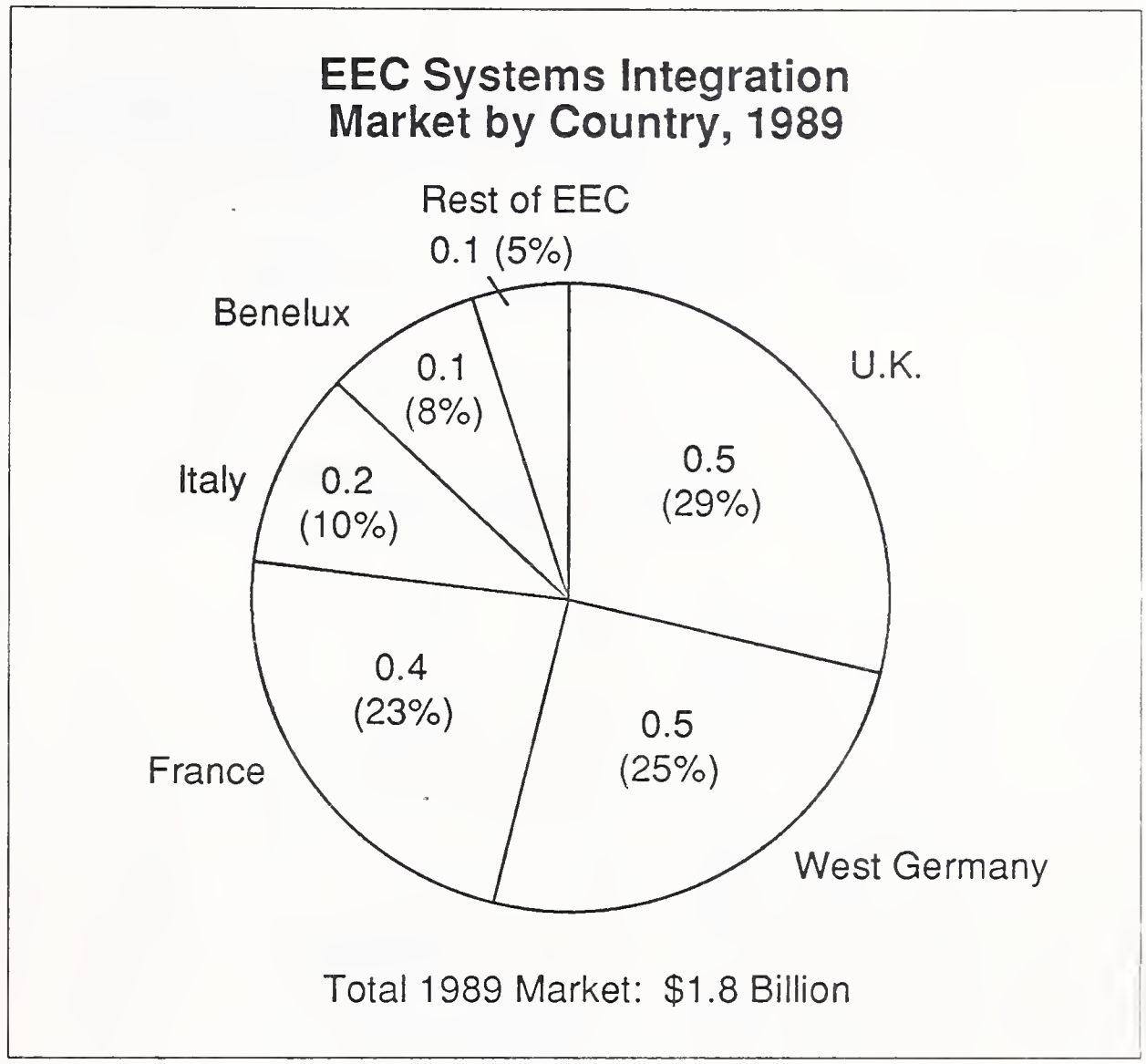
EXHIBIT VI-56



A limited number of pan-European systems integration projects have already evolved, and vendors need to have good pan-European coverage. As with other delivery modes, most European vendors do not have this today. They may be strong in two or three member states, but not in all of them. Again, it is the U.S. vendors who tend to have better pan-European coverage.

European vendors in this market tend to be well aware of their limitations, and are looking to improve their geographic coverage. Unlike other delivery modes, European vendors tend to get a degree of preferential treatment, especially if the client is a government, or the European Commission itself. U.S. vendors will therefore be less able to dominate this market in the 1990s, assuming that European vendors overcome any geographic shortcomings.

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EXHIBIT VI-57

Top EEC Vendor Rankings and Market Shares—Systems Integration, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Cap Gemini Sogeti	11.0	160
2	SD-Scicon	5.9	85
3	Sema	5.5	80
4	Logica	4.5	65
5	Siemens	4.5	65
Top U.S. Vendors			
1	IBM	11.4	165
2	Andersen	10.0	145
3	Unisys	3.1	45
4	Digital	1.7	25
5	EDS	1.0	15
Other Vendors		41.4	600
Total		100.0	1,450

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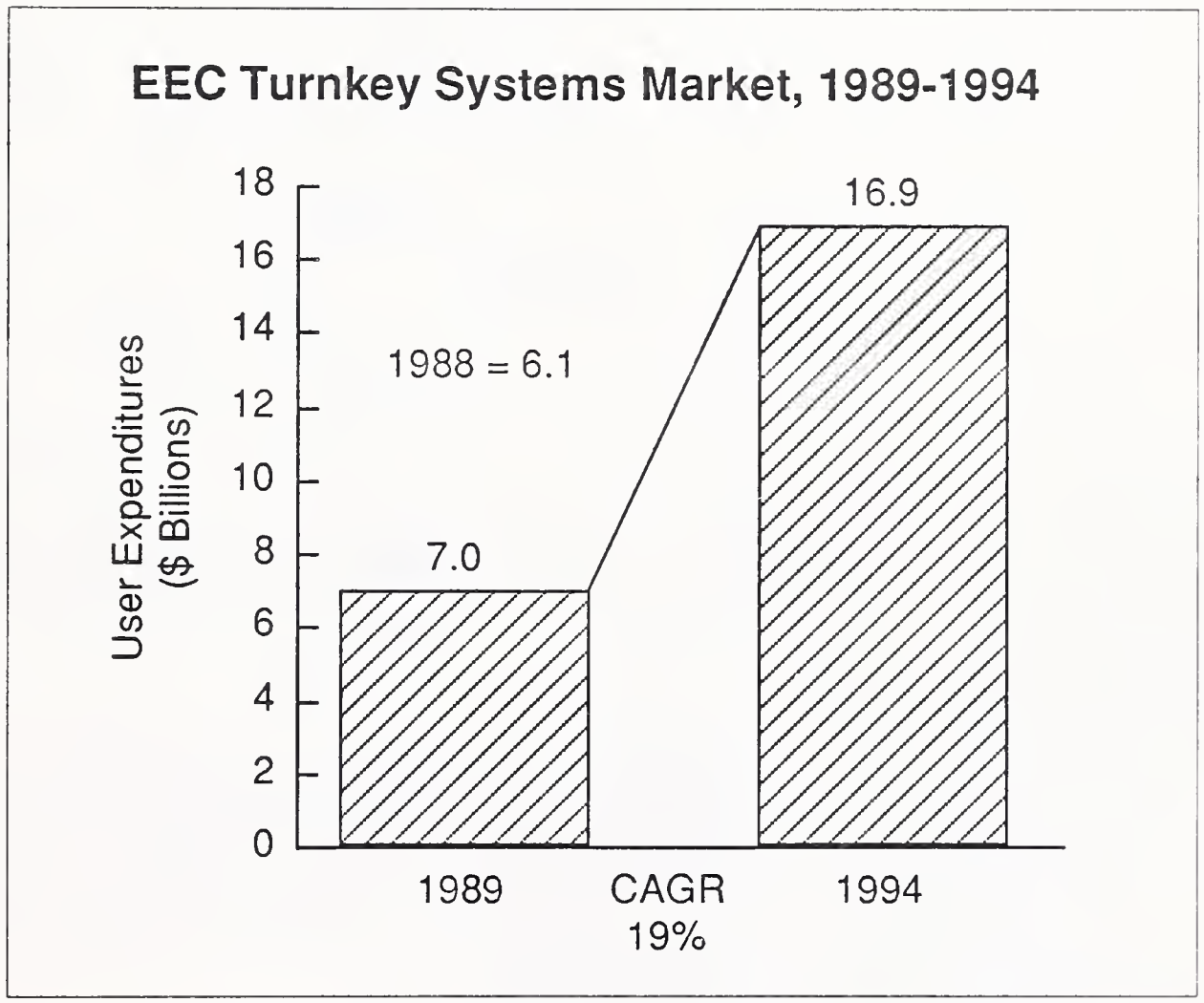
6. Turnkey Systems

As Exhibit VI-58 illustrates, INPUT forecasts that turnkey systems should grow by 19 percent over the period from 1989 to 1994. Exhibit VI-59 gives INPUT's breakdown by EEC member state. The major EEC turnkey market is West Germany, accounting for 34 percent of the total EEC market. France, the largest information services market, is only the third-largest turnkey market.

EXHIBIT VI-58



The two principal reasons for this are that West Germany has three important equipment vendors, two of which use turnkey systems as their principal delivery mode (Nixdorf and Mannesmann Kienzle), and that West Germany is the major manufacturing nation in the EEC. The manufacturing sector is very suitable for turnkey systems, whether these are specific CAD/CAM packages or manufacturing systems.

Southern European nations have a preference for bespoke systems, rather than standard packaged systems. Turnkey vendors have more success in countries like West Germany and the U.K.

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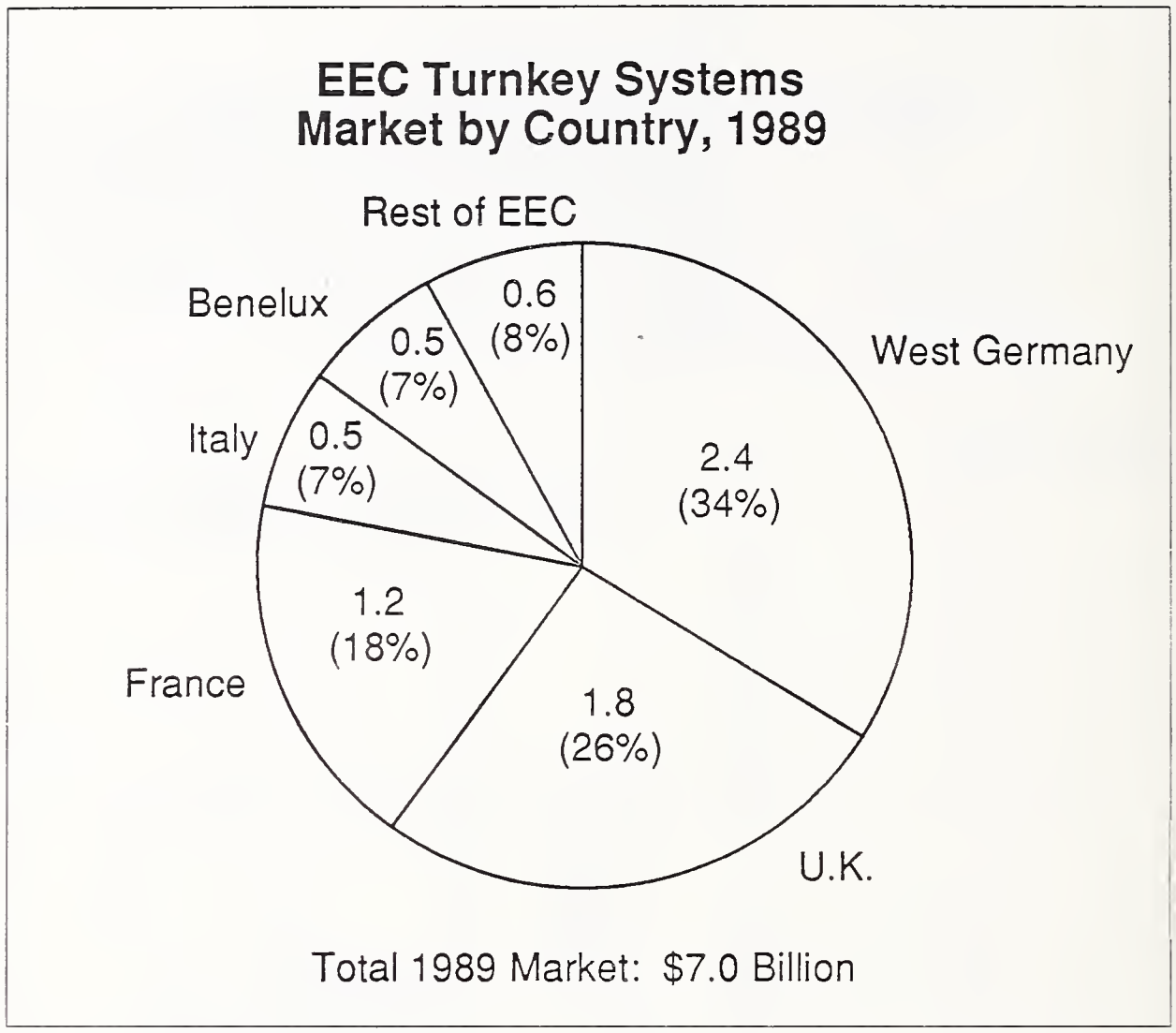
EXHIBIT VI-59



The forecast average growth rate of 19 percent per annum hides a distinct difference seen today between the growth rates of equipment vendors and independents selling turnkey systems. As Exhibit VI-60 illustrates, both U.S and European equipment vendors are major EEC turnkey vendors. Nixdorf alone accounts for some 14 percent of the total EEC turnkey market.

U.S. equipment vendors tend to have targeted those application markets which are already pan-European. The CAD/CAM market is dominated by U.S. equipment vendors delivering turnkey systems—IBM, Prime, Intergraph, and McDonnell Douglas. This market is more mature than many others, and so is only growing at some 10 to 15 percent per annum.

European equipment vendors are in a wide range of turnkey markets, but have been adversely affected by the growing demand for UNIX solutions. They have been reluctant to port their huge portfolios of applications software from their proprietary operating systems to UNIX. As a result, they have lost market share and have only been growing at 10 to 15 percent per annum at best. Independent vendors have been recording

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EXHIBIT VI-60

Top EEC Vendor Rankings and Market Shares—Turnkey Systems, 1988

Rank	Company	Market Share (Percent)	Estimated Revenues ($ Millions)
Top European Vendors			
1	Nixdorf	14.4	885
2	Mannesman Kienzle	4.8	295
3	Siemens	1.5	95
4	ICL	1.5	90
5	Philips	1.3	80
Top U.S. Vendors			
1	Prime	7.6	470
2	McDonnell Douglas	4.5	275
3	Intergraph	3.1	190
4	IBM	2.4	145
5	Unisys	1.9	120
Other Vendors		57.0	3,505
Total		100.0	6,150

growth rates of some 25 percent per annum, and in excess of 40 percent for those who have ported to UNIX quickly.

INPUT does not see that equipment vendors will continue to grow at only half the rate of independents for long. U.S. equipment vendors are seeking to exploit any new pan-European markets which open up in the 1990s though the Single European Act. European equipment vendors are now porting to UNIX, and so will be in a strong position to attack this turnkey market in the early 1990s. However, as in other information services delivery modes, European equipment vendors do not have as good a pan-European coverage as their U.S. competitors.

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In general, at least 50 percent of European equipment vendors' sales are in their traditional home markets. There tends to be very poor European coverage throughout other member states. U.S. equipment vendors have very good pan-European coverage, and so are potentially in a far stronger position to attack new pan-European turnkey markets in the 1990s, or to work with those independent vendors to assist them in selling either their own turnkey, or software products solutions, on their equipment platforms.

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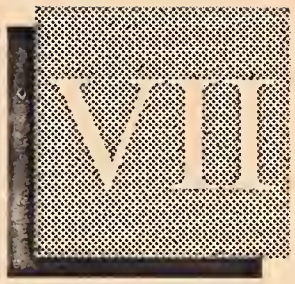

Vendor Actions for the 1990s

VII

Vendor Actions for the 1990s

There are many pressures on and challenges to European vendors that are quite separate from those being created by the Single European Act. This chapter looks at the prime forces affecting vendors, due to the Single European Act and to other reasons. It reviews the market research on these issues that INPUT undertook for this report.

This chapter also looks at what actions vendors should take in response to these challenges, especially those actions that should be a direct result of the Single European Act.

A The Challenge of Change

The European software and services industry is constantly faced with rapid technological change. As a result, there is the never-ending necessity for vendors to try to stay at the leading edge of technology so as to be as competitive as possible in their chosen sphere of operations.

Clients feel the same pressures, and hence are increasingly looking to software and services vendors to provide them with total solutions to what they see as an increasingly complex problem. This demand from end users for high-quality total solutions only adds to the challenges for vendors.

In an industry growing, on average, at around 20 percent per annum, a shortage of resources can quickly become a serious issue. Many small vendors find that they have growth rates in excess of 40 percent per annum. At these levels, they can have serious problems in serving customers, and are often forced to shift resources away from active marketing and into support functions.

It is not unusual to find vendors concerned about all resources, both staff and finance. In addition, they are worried about maintaining their quality of service and products. The Single European Act and the opportunities that it may offer in the 1990s can easily become secondary to the

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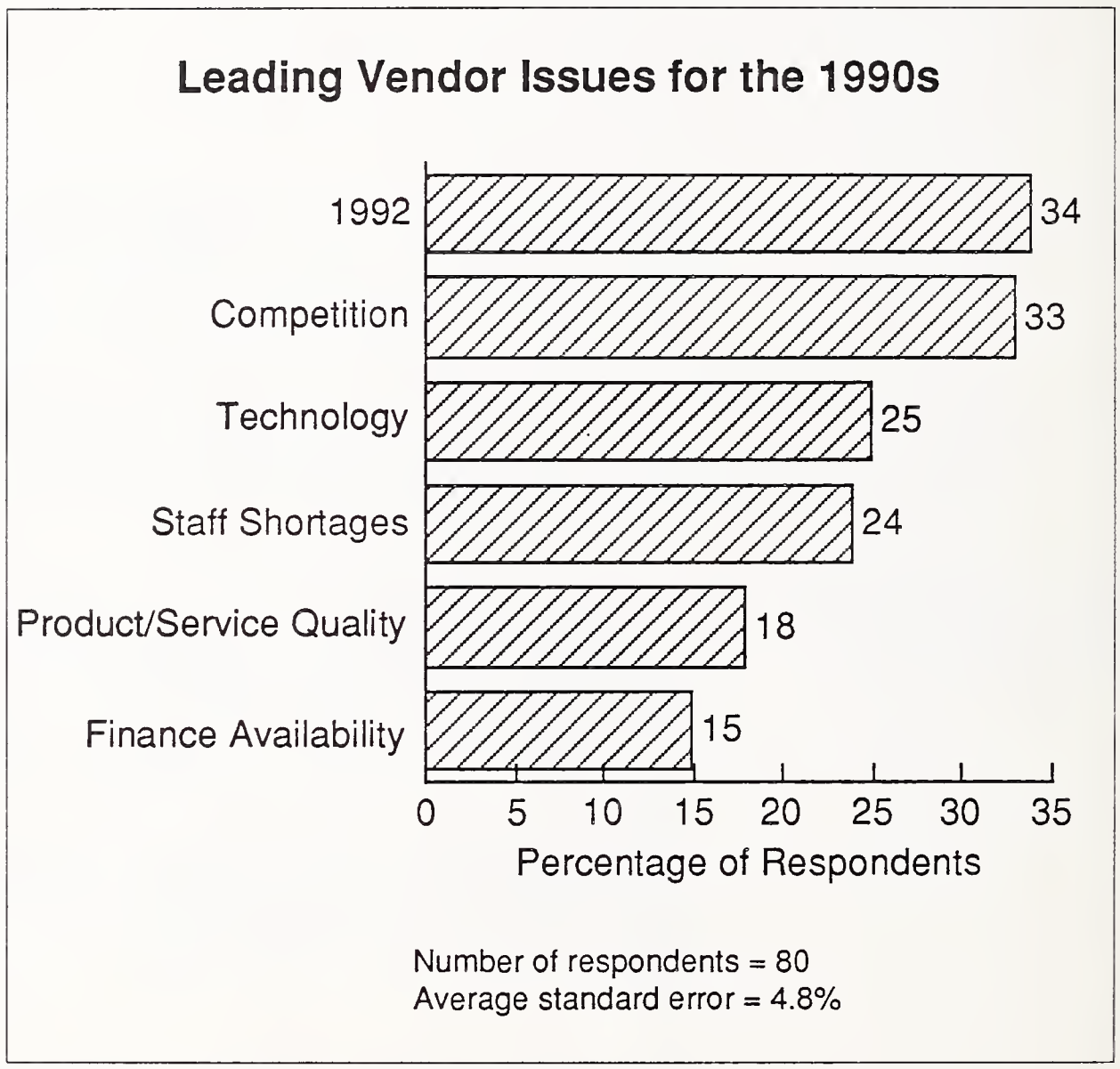
pressures facing vendors in meeting the demand of existing clients on a day-to-day basis.

The reality is that even with all the challenges and pressures that vendors face, European software and services vendors still see that the opportunities that should open up through the Single European Act are the most important issue facing them. This is illustrated in Exhibit VII-1, which shows the results of INPUT's question to vendors about the top three pressures and challenges facing them today.

EXHIBIT VII-1



For the Single European Act, or "1992" as it has become known in the popular press, to be ranked highest in importance to vendors only reinforces the fact that the 1992 campaign by the European Commission has been one of the most successful awareness campaigns ever. There are many other challenges facing vendors, and it is very interesting to see that vendors ranked competition as their second most important challenge.

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Keeping up with technological change, and staff shortages came third and fourth. These were of significantly less importance than 1992 and competition. Maintaining the quality of products and services was ranked the fifth most important, and availability of finance sixth.

The conclusion that can be clearly drawn from this INPUT research is that exploiting Europe is the most important challenge, and there is going to be considerable competition in the race to claim the benefits of these European opportunities. During this research, INPUT also discovered an underlying concern of vendors over the pressures arising from the Single European Act on their client base, and whether it would remain competitive in the 1990s in a more open EEC.

U.K. vendors were worried that the U.K. manufacturing base would deteriorate further if trade barriers were eliminated. Italian vendors were concerned that their large government sector would no longer be closed off to foreign competition, especially in the area of public procurement. It was also recognized that a more open EEC market presents export opportunities for their clients, from which software and services vendors can benefit if their clients are more successful than in the past.

The concern about competition came from three distinct areas:

- U.S. vendor competition
- unexpected competition through the blurring of boundaries
- losing control of domestic markets

French vendors showed concern over the real threat that U.S. vendors pose to indigenous EEC vendors, and the fact that many vendors are spreading their activities into many different types of products and services. As a result, they can no longer be clearly categorised as a particular type of competitor. In addition, French vendors are very concerned over the competition of U.K. vendors in the banking and financial sector. This represents some 25 percent of the French software and services market, and French vendors recognize that U.K. vendors are particularly strong in this area.

Italian vendors were particularly concerned over the pressures stemming from the speed of technological change. In general, southern European markets are less technologically advanced than their northern counterparts. UNIX, other standards and copyright were also mentioned as areas of technological challenges. Standards harmonisation, such as switching to UNIX, was expected to affect vendor operations significantly.

Vendors were questioned on the impact standards have had and will have on their operations. The results of this research are given in Exhibit VII-2. This shows that over half the vendors interviewed will change their operations as a direct result of both de facto standards, like UNIX

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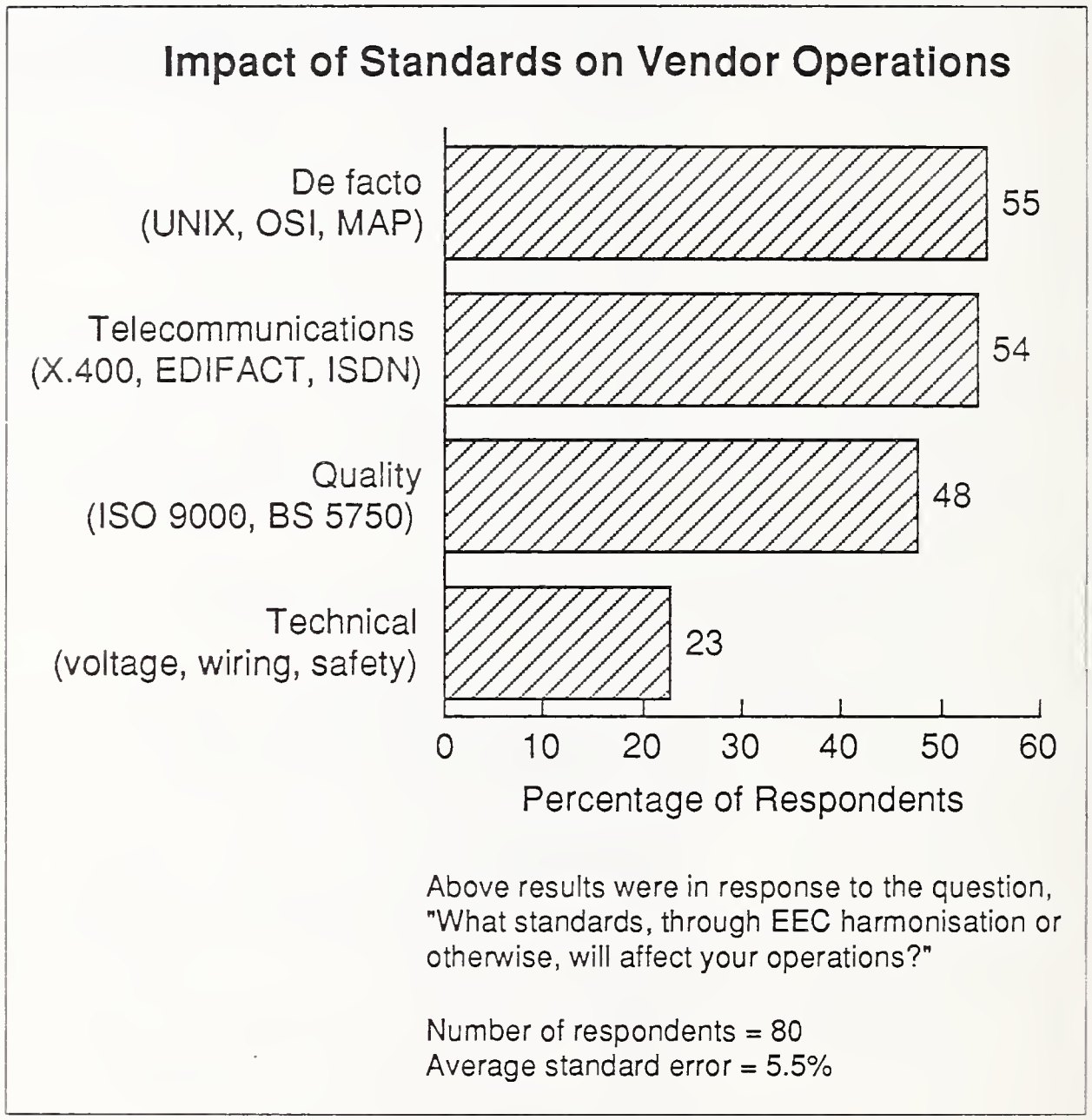
and OSI, and telecommunication standards, such as X.400 and EDIFACT. New quality standards, such as ISO 9000, will affect nearly 50 percent of all vendors interviewed, whereas technical standards will affect less than a quarter. Most vendors affected by technical standards offer equipment support services.

EXHIBIT VII-2



Shortage of staff, and difficulty in finding staff of the right quality are challenges that appear to be more acute in the United Kingdom and Spain. Some vendors mentioned that there was a problem in finding local nationals for foreign operations. Interestingly, some Spanish vendors felt that 1992 would help alleviate their national staff shortage by encouraging greater mobility of foreign nationals to work in Spain.

Clients are becoming more sophisticated, more demanding, and have greater expectations, which leads to demand for higher quality services and products. Some vendors saw quality as a major challenge in the 1990s; others saw deadlines, or the gradual evolution of customer demand for more customization or for more complete solutions.

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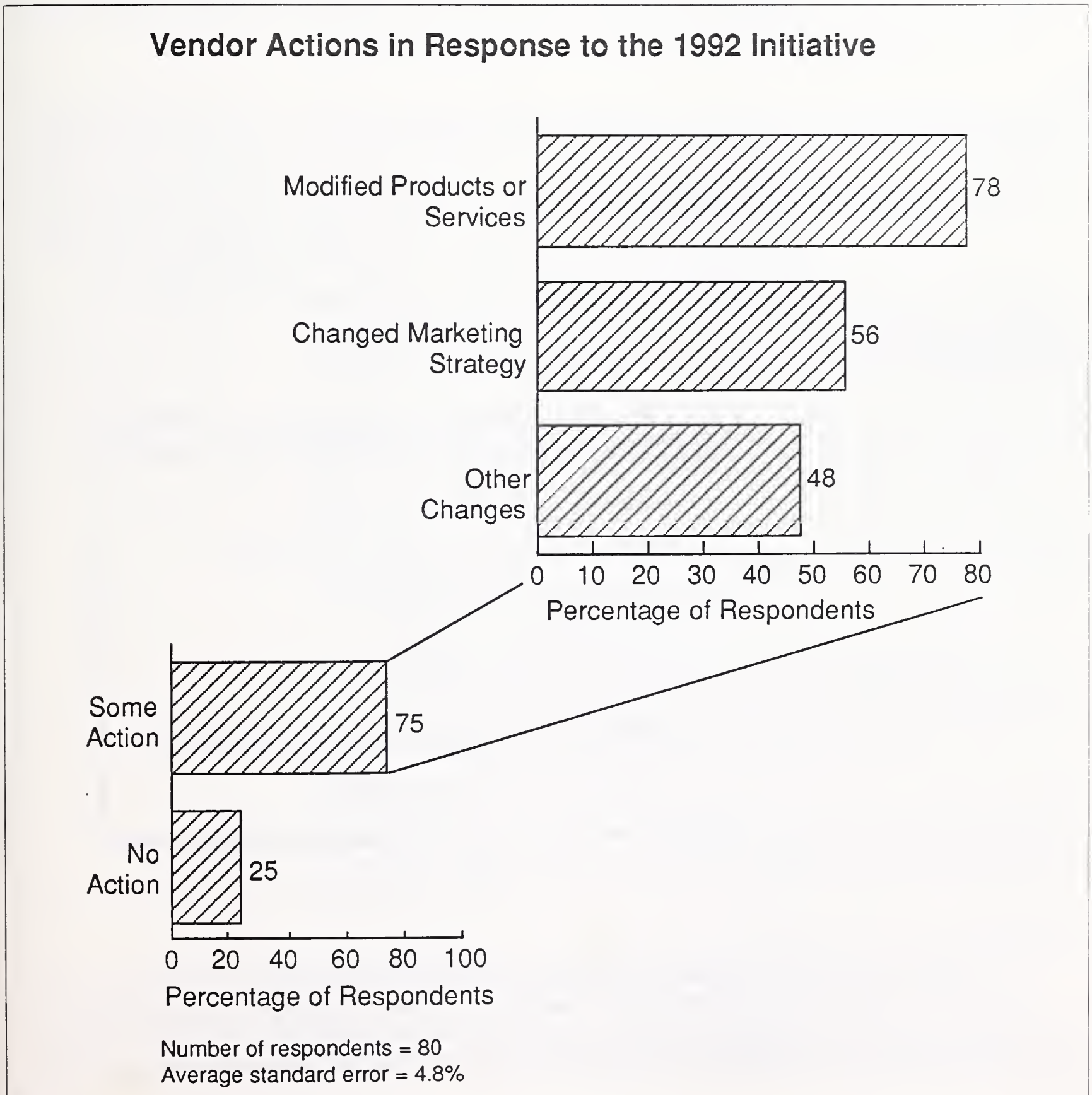
With the Single European Act being the leading issue facing European software and services vendors today, one would expect to see that vendors have already taken positive action to position themselves for the 1990s. INPUT's research confirms this. As Exhibit VII-3 illustrates, 75 percent of vendors interviewed stated that they have take some action in response to the Single European Act and a more open Europe in the 1990s.

EXHIBIT VII-3



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Of the 20 vendors making up the 25 percent who had taken no action, only six were not aware that Single European Act legislation might affect them or their clients. However, nine had taken part, or intended to take part, in an EEC-funded project, implying that even these vendors were well aware of Single European Act developments.

Many of those vendors who stated that they have taken no action commented that any actions to become more European had already taken place before the Single European Act came into being, or were being put into place for other reasons than EEC initiatives. In other words, the EEC's 1992 initiative is acting as a catalyst to accelerate a process that in already in motion.

B

Product and Services Redesign

As Exhibit VII-3 illustrates, 78 percent of those vendors who stated that they have already reacted to the 1992 initiative have reacted by initiating changes in their products and services. One-third of these changes are to make products multilingual, or multicurrency. The other main reason for making changes is to fall into line with industry standards. Exhibit VII-4 lists some of the comments made by vendors to INPUT during its research on how they might change their products and services.

EXHIBIT VII-4

Vendor Comments on Changes to Product and Service Design, and Marketing Strategy

- Setting up global product management
- Changing all sales literature
- Standardising contracts
- Internationalising production
- Internationalising research and development
- Looking for European projects

Some vendors have been forced to adapt their products and services as a result of client demands. Many vendors now specify the requirement to sell their products and services in a range of European markets as initial design criteria. This should be seen by the software and services industry

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as a trend towards becoming more global. The Single European Act and the gradual evolution of a pan-European market is just one example of the global market getting smaller and vendors being forced to seek customers internationally.

Some vendors that are already multinational have reviewed and adjusted their pricing strategies in order to provide greater consistency across Europe. However, developing a single pan-European pricing schedule can be extremely difficult. Higher prices can be obtained for the same products and services in different EEC countries, even today. Pan-European vendors are therefore reluctant to publish a single pricing schedule in which the pricing in every country is equivalent, having adjusted for ruling exchange rates.

Under the Treaty of Rome, vendors cannot stop clients from buying their software products at the cheapest price in a different EEC country from the one in which they have to be installed. However, vendors still try to discourage this practice, by not supporting such products in countries in which they have not been bought.

Vendors have stated very firmly to INPUT that in order to be successful in any EEC country, any product or service must be presented to prospective clients as a local product or service. As Exhibit VII-5 illustrates, the international content of products and services is often very different.

In today's global village, the manufacturing industry is always seeking to become more global. Providers of services are following the opposite trend, trying to be more local. A typical example is the car industry. Manufacturing is located at strategic nodal points so as to cover as large a market as possible. To sell their products and service their customers, car manufacturers establish highly complex dealer networks, making them as local and customer-orientated as possible.

The same trends are seen in the computer market. Equipment vendors manufacture hardware platforms and peripherals at central locations, for global or continental distribution. Service is provided by nationals who understand the needs and culture of their local client base.

Software products can either be international or national, depending upon how suited they are to central development or local customization. Systems software often tends to be suited to central development. However, many niche applications have to be developed locally for local markets.

Software application vendors are looking increasingly at the possibility of developing a kernel product, which through parameterisation can be readily modified into additional language versions. One of the most difficult areas of product redesign is national tax legislation. Although a single application, such as a fully integrated manufacturing package, can

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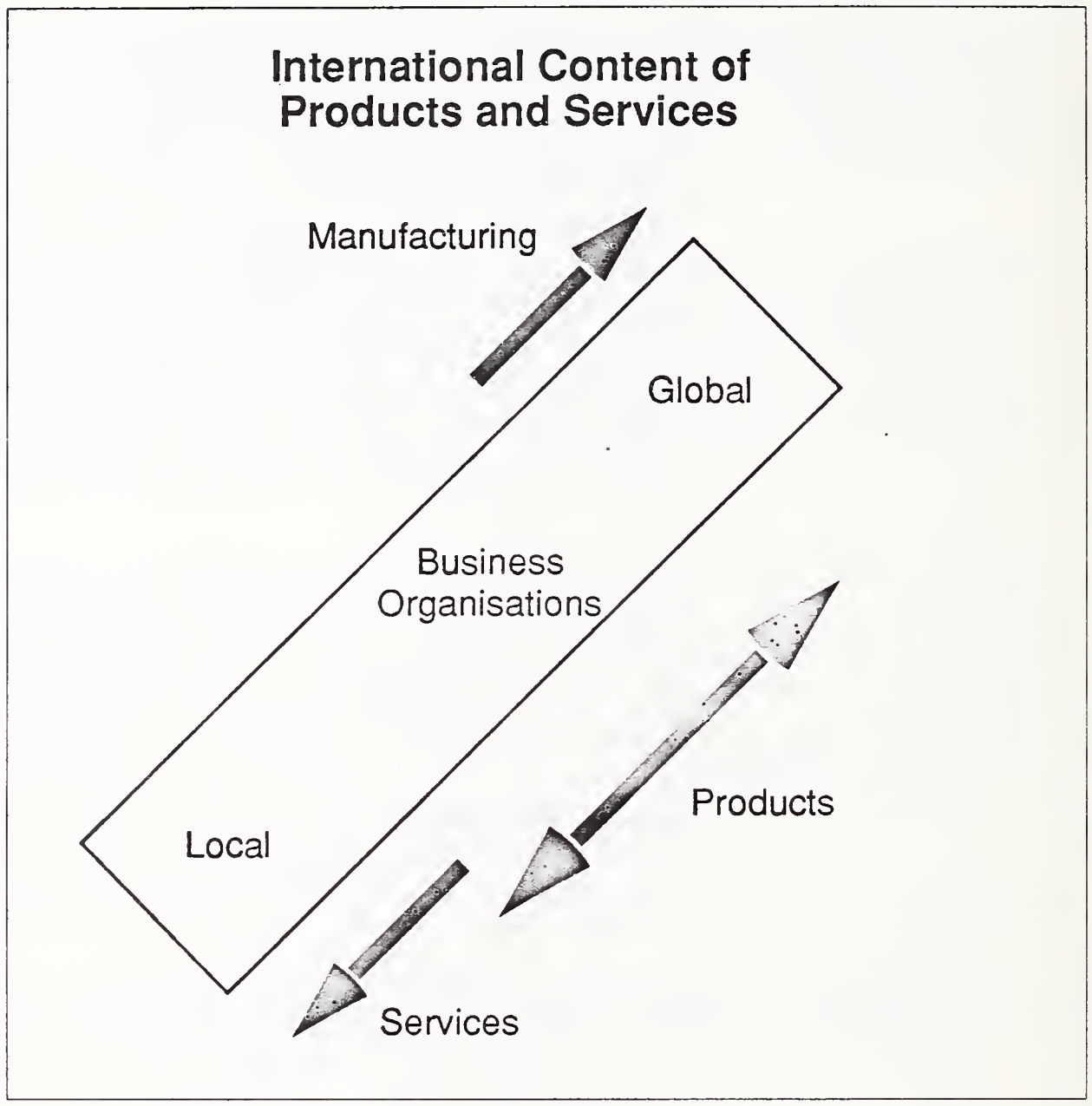
EXHIBIT VII-5



be modified to local and accountancy practices, vendors find it exorbitantly expensive to maintain tax modules, as governments tend to change taxes regularly and with little advance warning.

Within Europe, all software products and services have to be redesigned to some degree. For vendors to be successful, promotion material, screen and documentation should all be translated into the local language. Although many people in the European software and services industry speak each others' languages today, end users do not. They want and will continue to demand products and services designed for them, not for some other nation, even though it may also be in the EEC.

C Marketing

As Exhibit VII-3 illustrates, 56 percent of vendors who have taken some action due to the 1992 initiative reported that they have specifically changed their marketing strategy. This is equivalent to some 40 percent of all vendors interviewed. In addition, over 20 percent of all vendors interviewed by INPUT admitted to looking for mergers or acquisitions or

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alliances with other companies in foreign countries. A number of vendors admitted to already having tried and failed, due to difficulties with national regulations in other EEC countries. Some vendor comments on actions taken to modify marketing strategies are listed in Exhibit VII-4.

These percentages should be seen as being high, especially since this research has been carried out some three years before the target date of 1992. It means that many vendors have already considered how they should restructure their marketing in light of the Single European Act developments. Considering that many smaller vendors do not export at all, or only export a small amount, and that numerically these represent a very significant percentage of the total 20;000 EEC vendor population, INPUT's result of 20 to 40 percent activity is extremely significant.

The principal change in vendors' marketing strategies has been to look at how they can exploit new and large pan-European markets in the 1990s. This may have meant revising their strategic marketing plans without physically changing their existing sales organisation. In some cases, it has meant moving into other EEC markets well in advance of the effective date of the Single European Act legislation.

The whole thrust of the Single European Act is to break down national barriers and to expand national markets into pan-European markets. In this process, the European Commission hopes that the fragmented business economy of the EEC will realign into a smaller number of larger and more efficient enterprises. Through this major restructuring, the Commission hopes that the EEC will create companies able to take on U.S. and Japanese competition in the 1990s.

Mergers and acquisitions are the principal route for this restructuring. This can be seen not only in the software and services industry, but in all industrial sectors. In the past, some companies have been forced into acquisitions in order to compete in national markets. In the future, many of these mergers and acquisitions should be to exploit new pan-European markets.

Moving into new European markets can be high risk. There have been two principal methods of development for software and services vendors:

- exporting existing products and services
- producing locally abroad

Either of these two options can be done through:

- third-party organisations
- own organisation

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Many software products and turnkey vendors have in the past preferred to modify and export existing products, initially via local third-party distributors. If this is successful, then they may set up wholly owned subsidiaries. This development route can take time, and a quicker route is to acquire a local company in the foreign country and use this as the new development and support base. However, if this acquisition is not done at the right price, this can be a very high-risk alternative.

Professional services and systems integration vendors do not have these alternatives. The principal product that they are selling is people skills. To expand into other countries they have to either set up their own subsidiaries, or acquire a local professional services vendor.

Processing and network services vendors have even more of a problem in developing pan-European services. Their production unit is a large computing centre that can be located at some suitable location, somewhere towards the centre of the EEC. Considerable thought has to be given to the differences in telecommunication charges levied by different PTTs for internal European and international data traffic. The Netherlands has become a popular location, having some of the lowest PTT charges in Europe.

Locating and building a pan-European network is highly capital-intensive. This leads to a manufacturing style of organisation, not ideally suited to selling local services. Many vendors therefore look for third-party resellers in different countries. This necessitates a complex, tiered organisation. To date, only U.S. vendors have been successful in building and selling pan-European network services covering all EEC countries.

Equipment vendors have also developed a similar tiered corporate structure, producing equipment at a few central locations, and selling and supporting clients through a variety of local, national outlets. In many instances, equipment vendors find it difficult to compete with the independent vendor in selling software and services because of the cultural difference between manufacturing and selling services, as was illustrated in Exhibit VII-5.

In the past, equipment vendors have often redeployed existing staff into sales and marketing functions, rather than gone into the open market and hired specialist sales and marketing experts. For equipment sales, this strategy has not been a major problem. Now that equipment vendors desire to become more involved in software and services, this strategy is certainly not the best.

Independent vendors have told INPUT that they will hire an engineer whom they will teach about computers in order to sell a manufacturing package, rather that hire a computer expert whom they will train in their manufacturing package. Equipment vendors are gradually understanding

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that to compete in the software and services market, they have to adopt similar tactics, but it is taking some time for them to change.

To date, the move by domestic European software and services vendors into other EEC countries has tended (with some notable exceptions) to operate along two separate axes, south and north. French companies have tended to look south to the other Mediterranean countries, Spain and Italy. This has tended to establish a grouping of interrelated Latin vendors.

In the north, U.K. companies have tended to look to Holland and the Germans to Austria and Switzerland. Neither U.K. nor German vendors have made major moves into the Mediterranean countries, but they have entered France, just as certain major French vendors have moved into the U.K. and West Germany. The French software and services industry is all centred around Paris in the north, and so another grouping of vendors has evolved in the north of the EEC. Only French vendors are in both groupings.

Historically, these export trends have not been confined to the boundaries of EEC. Each part of the European community has natural links to the rest of the world, as a result of historical and cultural spheres of influence. Often these past links have been stronger than the new, internal EEC links. One of the changes in marketing strategies of a number of vendors interviewed by INPUT has been to reorientate their export thrust away from the old non-European markets, and into the EEC.

Exhibit VII-6 illustrates the global links that the EEC has inherited from its different member states. Individual business enterprises have often followed these links, as they offer low-risk export alternatives when looking for new market opportunities. This is just as true for the clients of software and services vendors as for the vendors themselves.

An "external strategy" can also be seen for those companies specifically looking for alliances outside the EEC, with non-EEC companies who are worried about the possibilities of "Fortress Europe." These non-EEC companies wish to be represented within the EEC after 1992, and so are seeking to establish links now.

Danish companies have natural links with all other parts of Scandinavia. British companies have close associations with the United States and with other parts of the English-speaking world such as Australia, Hong Kong, and Singapore. Spanish companies have connections with South America. 1992 will not remove these traditional associations, but may well enhance them as natural conduits for trade between these other areas of the world and the EEC.

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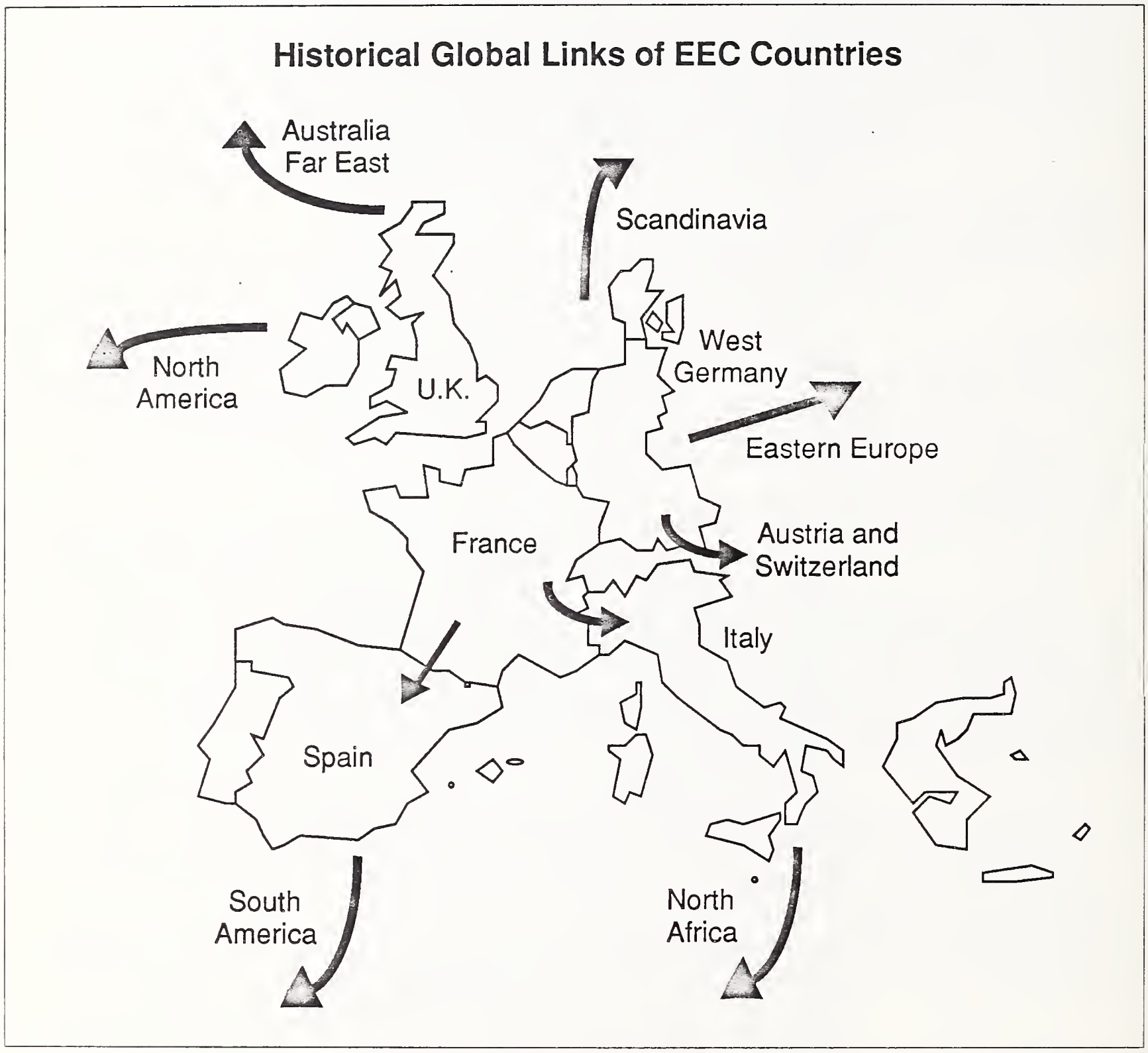
EXHIBIT VII-6



These different global links yet again emphasise the national differences that exist between the 12 member states. These differences can be to the benefit, and not to the detriment, of the EEC as a whole. They are an ideal example of why Europe will not and should not be seen as moving towards becoming a single entity. It is more a coming together of diversity.

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Just as the French have used Belgium as a stepping stone into the Netherlands, and the Germans have used Switzerland to start exports to France, so the U.S. has used the U.K. as a first move into Europe. Non-European vendors wishing to move into the EEC should understand these historical links and exploit them.

D

Other Vendor Actions

There is some conflict in attitudes between companies to the 1992 initiative. Some companies are definitely treating it as an event, and are taking the attitude that they want to be ready for it when it happens—if it happens. Others take the attitude that it has already happened, and that 1992 is just a step in their overall strategy. The majority of vendors are somewhere between the two.

As Exhibit VII-3 illustrated, just under 50 percent of vendors who have reacted to 1992 have also undertaken some form of internal change other than product and service redesign, or changes to their marketing strategy. Vendor comments on these additional actions are listed in Exhibit VII-7.

For many vendors, these additional actions have been in the form of building up contact with the European Commission in Brussels. From INPUT's experience, it is absolutely essential that vendors set up this contact. It is the only route by which vendors can ensure that they are properly informed about EEC developments.

The Commission's staff is efficient, hard-working and helpful. If vendors do not make any effort to keep in close contact with Brussels, they only have themselves to blame, if and when they find that they are out of touch with EEC developments.

In additional to keeping in contact with Brussels, another essential action is to take on good international legal and financial advisers. If vendors do not have suitable advisers who are experts in European matters, they should give serious consideration to changing them now.

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EXHIBIT VII-7

Vendor Comments on Other Actions

- Organisation
  - Expanding the organisation in anticipation of 1992
  - Hiring advisers
  - Building an internal network
  - Hiring foreign directors
  - Setting up a special department
  - Hiring a Euromanager
- Language
  - Attaching more importance to language ability when recruiting
  - Conducting language research
- Brussels
  - Sending people to Brussels
  - Hiring a consultant in Brussels
  - Setting up lobbying activity in Brussels
  - Having permanent staff in Brussels
- Becoming more European
  - Setting up working parties to develop a strategy
  - Travelling more
  - In-house education
  - Recruiting more foreign nationals

E

EEC-Funded Projects

Some 60 percent of vendors interviewed by INPUT in its research were involved, or planned to be involved, in EEC projects, as Exhibit VII-8 illustrates. Details of these projects are given in Appendixes I, J, K and L.

The involvement in projects by vendors varied significantly from country to country. All 10 Italian vendors interviewed stated that they were, or

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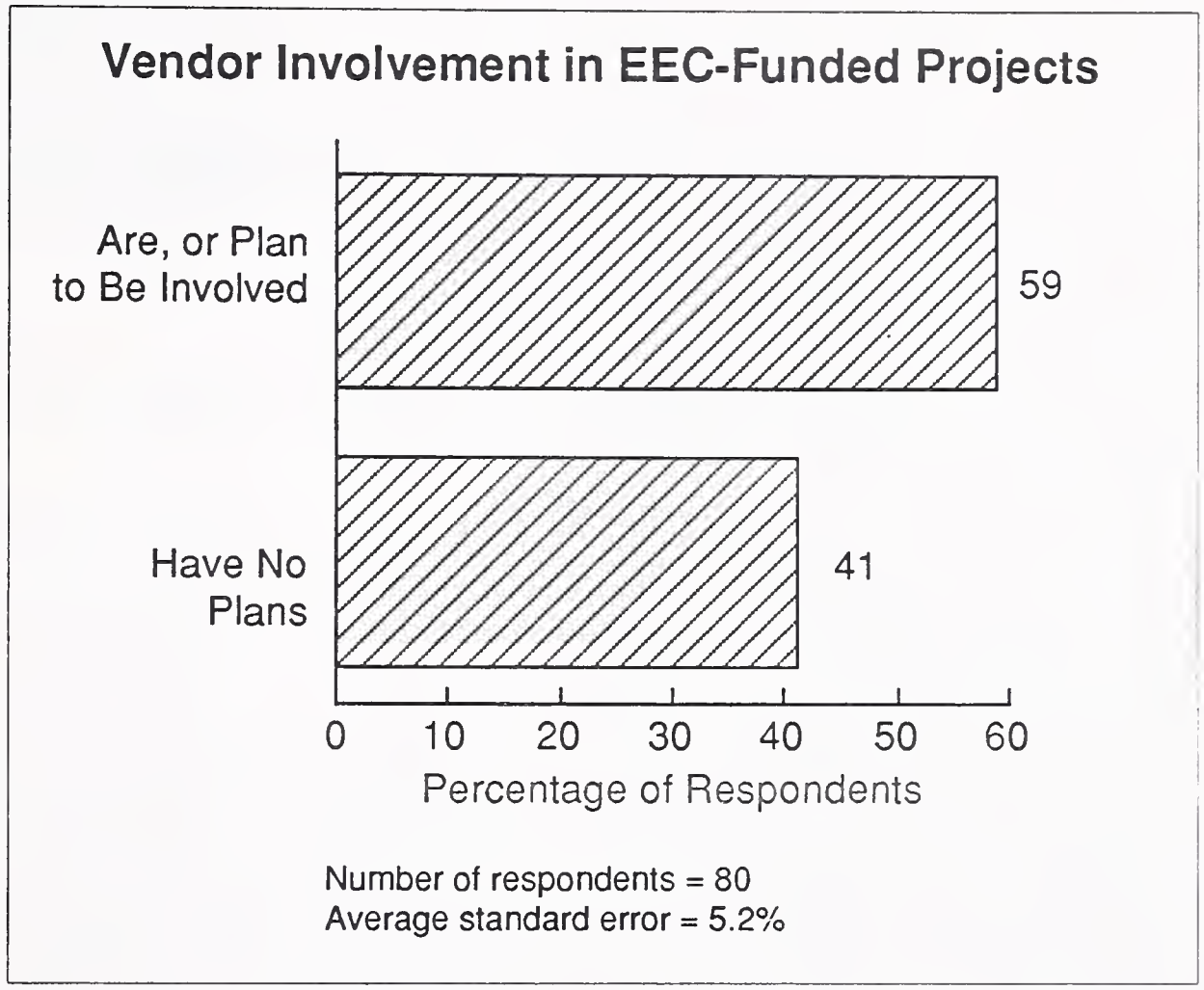
EXHIBIT VII-8



were planning to be, involved in at least one EEC-funded project. However, only four of the 17 U.S. vendors interviewed were interested in EEC projects.

Of the 52 vendors who offered an opinion about EEC-funded projects, most were enthusiastic about them, as illustrated in Exhibit VII-9. One reason given for the importance of EEC-funded projects was their role in combating Europe's technological decline. Another important reason was the fact that the EEC favours cooperation across boundaries when setting up and financing these projects, and so it was felt that these projects play an important role in breaking down barriers and unifying the market. Others stated that their benefit was strictly to the company involved, rather than to the EEC as a whole.

A number of respondents had been very sceptical about EEC projects before becoming involved, but were favourably impressed with the Commission as a result of their experiences. Some were very complimentary about the work of the Commission, stating that there were few professionals, but that they were exceptionally hard-working and of very high calibre.

Negative comments were that they were not sufficiently commercial or business-oriented, the projects just do not work, they require too much time and effort, and that there was too much favouritism in giving out contracts.

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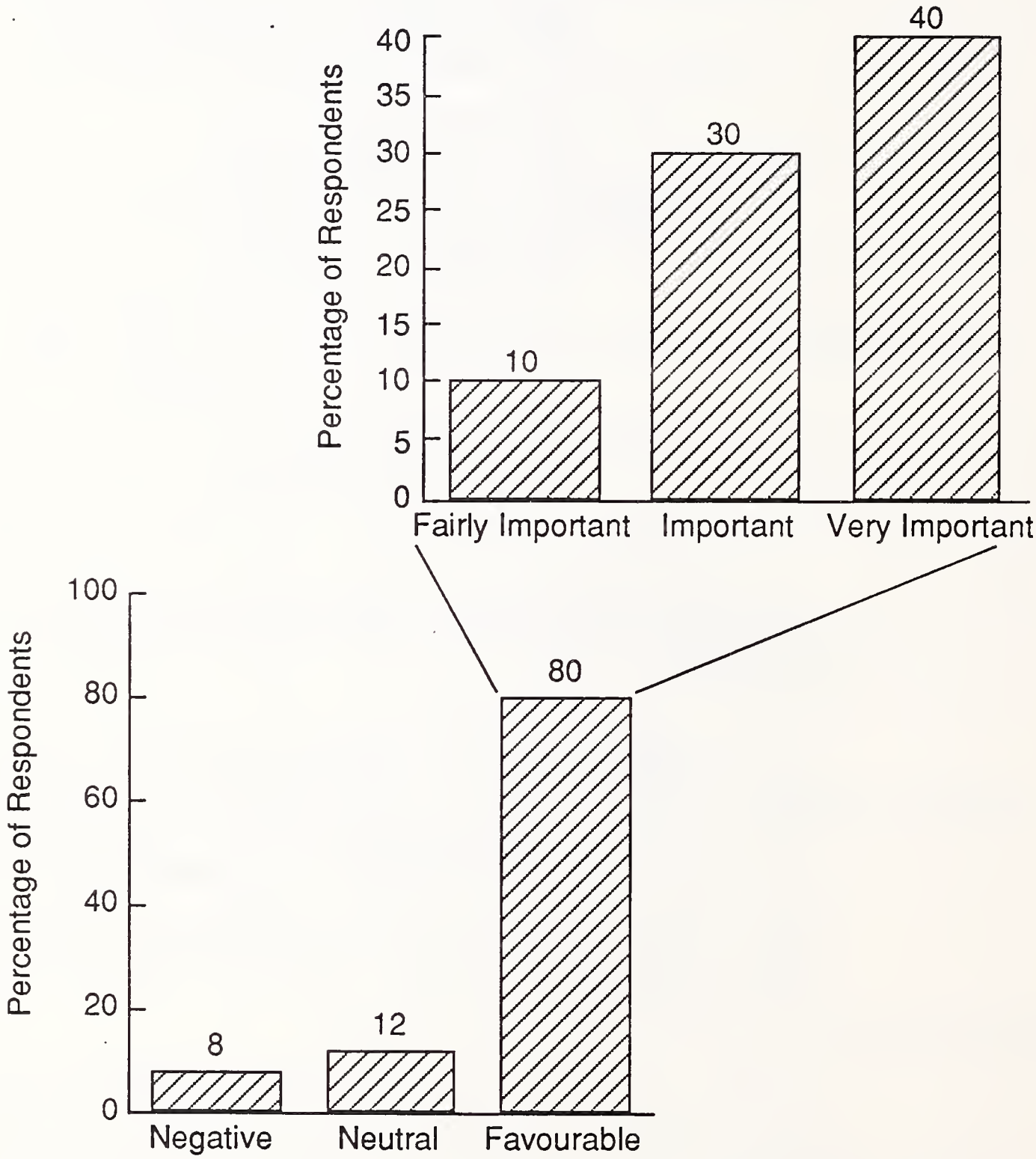
EXHIBIT VII-9

Vendor Attitudes towards Involvement in EEC-Funded Projects



Number of respondents = 52
Average standard Error = 3.4%

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Vendor Recommendations

VIII

Vendor Recommendations

In the chapter, INPUT looks at strategies that should be followed by vendors in the EEC software and services market over the next few years, with specific regard to exploiting the benefits offered through the Single European Act. Initially different strategic aspects are discussed that affect all vendors:

- timing
- resources
- national differences
- general strategies

Recommendations are then made for U.S. and for indigenous European vendors. Separate recommendations are also made for equipment vendors and for independent software and services vendors.

A Strategic Timing

Exhibit VIII-1 illustrates the seven discrete stages in the development of specific software and services markets in response to Single European Act legislation.

The first stage is awareness by the economy in general to the Single European Act and its likely effect on specific markets in driving them towards becoming pan-European. Secondly, there is specific Single European Act legislation in Brussels. This has to be implemented by one to 12 member states for there to be any tangible consequences.

Once the legislation has been implemented by member states, individual business enterprises in these specific market sectors can then react. One reaction will be to reassess their computer software and services strategy. At this stage, the software and services vendor becomes directly involved in the process, and is forced to adapt products and services in response to end-user demand.

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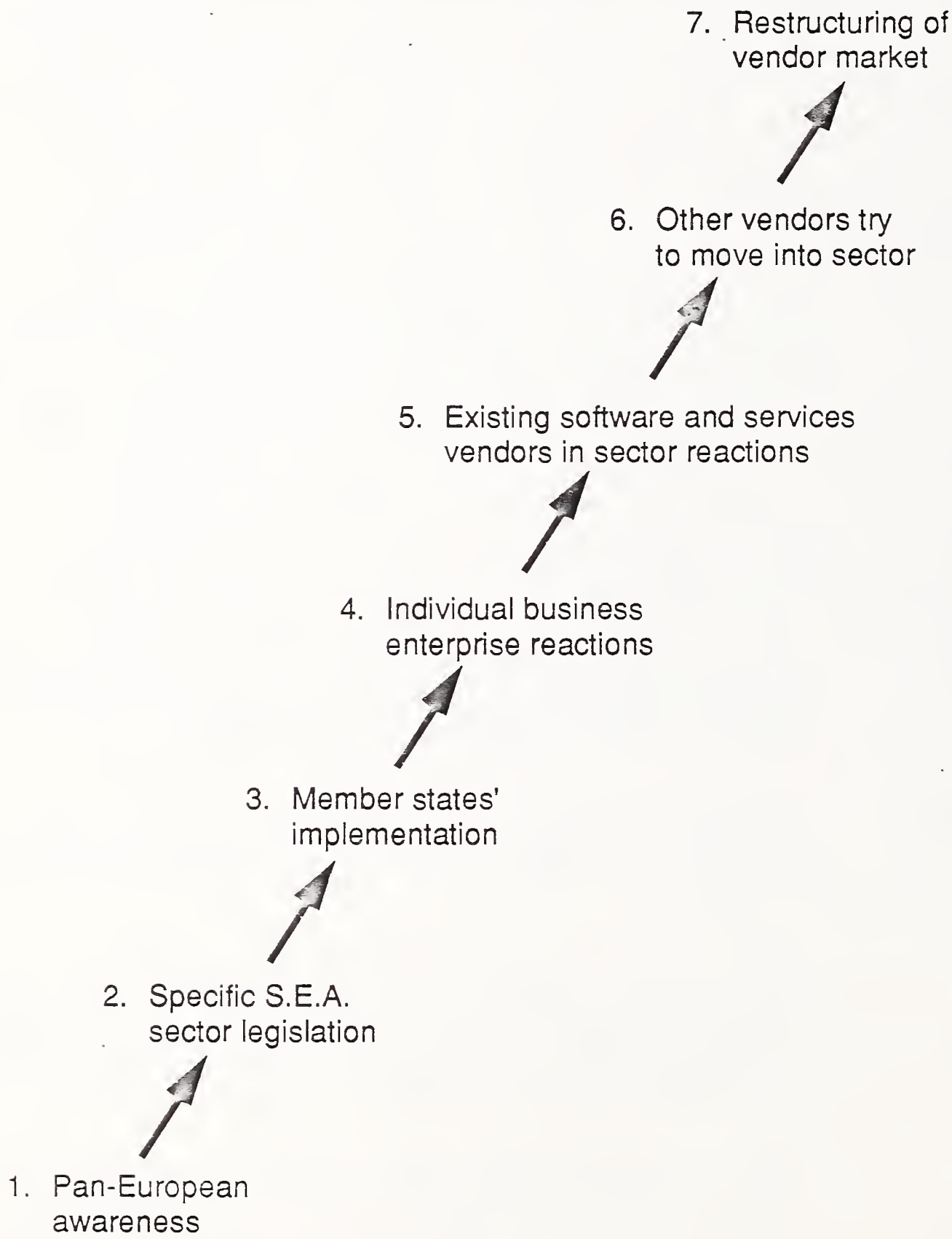
EXHIBIT VIII-1

Single European Act
Chain of Cause and Effect



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This new activity by software and services vendors in specific market sectors will draw the attention of other vendors not directly involved in these sectors to these new opportunities. As a sixth stage, new vendors will try to enter these sectors either through their own in-house developed products and services, or through mergers and acquisitions. The last phase is where there is a restructuring of the different vendors who are now in this sector, possibly through additional mergers and acquisitions.

In many specific instances, these different phases will overlap. Software and services vendors will anticipate developments in specific markets and may attempt to move in to them well before Single European Act legislation. However, Exhibit VIII-1 illustrates the principal that there are seven discrete phases that have to be gone through before each sector settles down to a new pan-European level at some time in the future.

By separating these seven phases, it becomes clear that timing is all-important in trying to benefit from the Single European Act. As has been discussed earlier in this report, the Single European Act will not affect the market in general, but sector by sector, as different legislation is passed and then implemented by individual member states.

The effect on the demand for software and services in a specific market sector affected by specific Single European Act legislation is illustrated in Exhibit VIII-2. As Single European Act legislation breaks down the traditional barriers which have been constraining this market sector to national boundaries, demand for software and services increases and clients expand into the larger pan-European environment. At some stage, the new pan-European market for these clients will settle down at some higher level, as will the demand for computer software and services.

Although in most cases this market development may be a gentle transition from a low national market demand to a new, higher pan-European demand level, in some cases it might not be so smooth a transition.

In certain instances, it is possible for vendors to become overconfident, as demand in a specific sector rises in response to the demands for it to become pan-European. When demand eventually settles down, individual vendors may well find that they or their clients have failed to anticipate the change. As a consequence, vendors continue to expand their resources in the short term in the expectation of continued high growth, only to find that demand growth has slowed down. Revenue growth no longer covers the extra costs. A poor financial situation results, and a company becomes a ready target for a hostile takeover, or bankruptcy.

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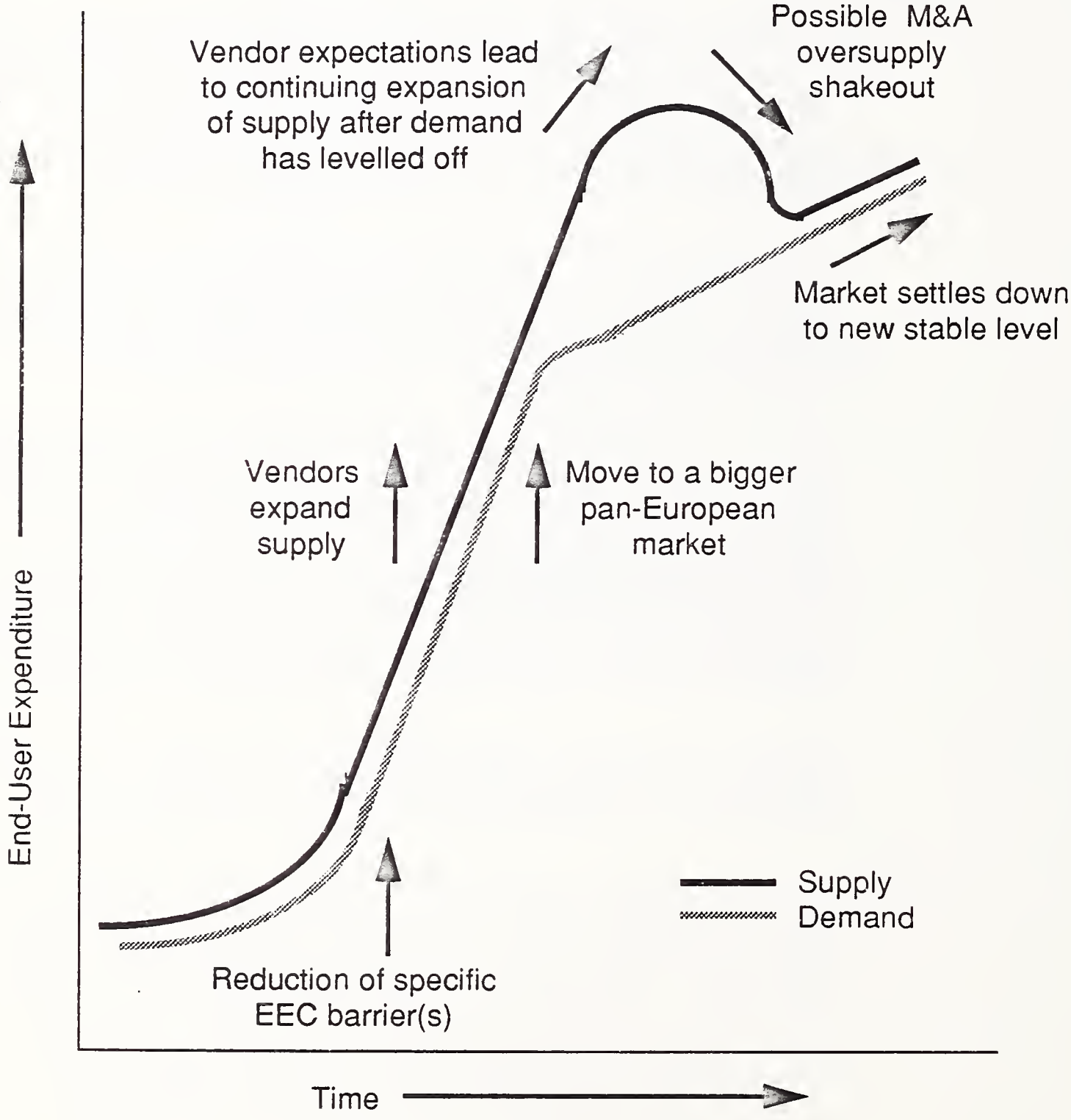
EXHIBIT VIII-2

Effect on Supply of Software and Services as a Specific Market Moves to Become More Pan-European



This development scenario will not be true for all sectors that will be affected by the Single European Act, but it will be true for some. In those instances where development follows this pattern, there are clearly times

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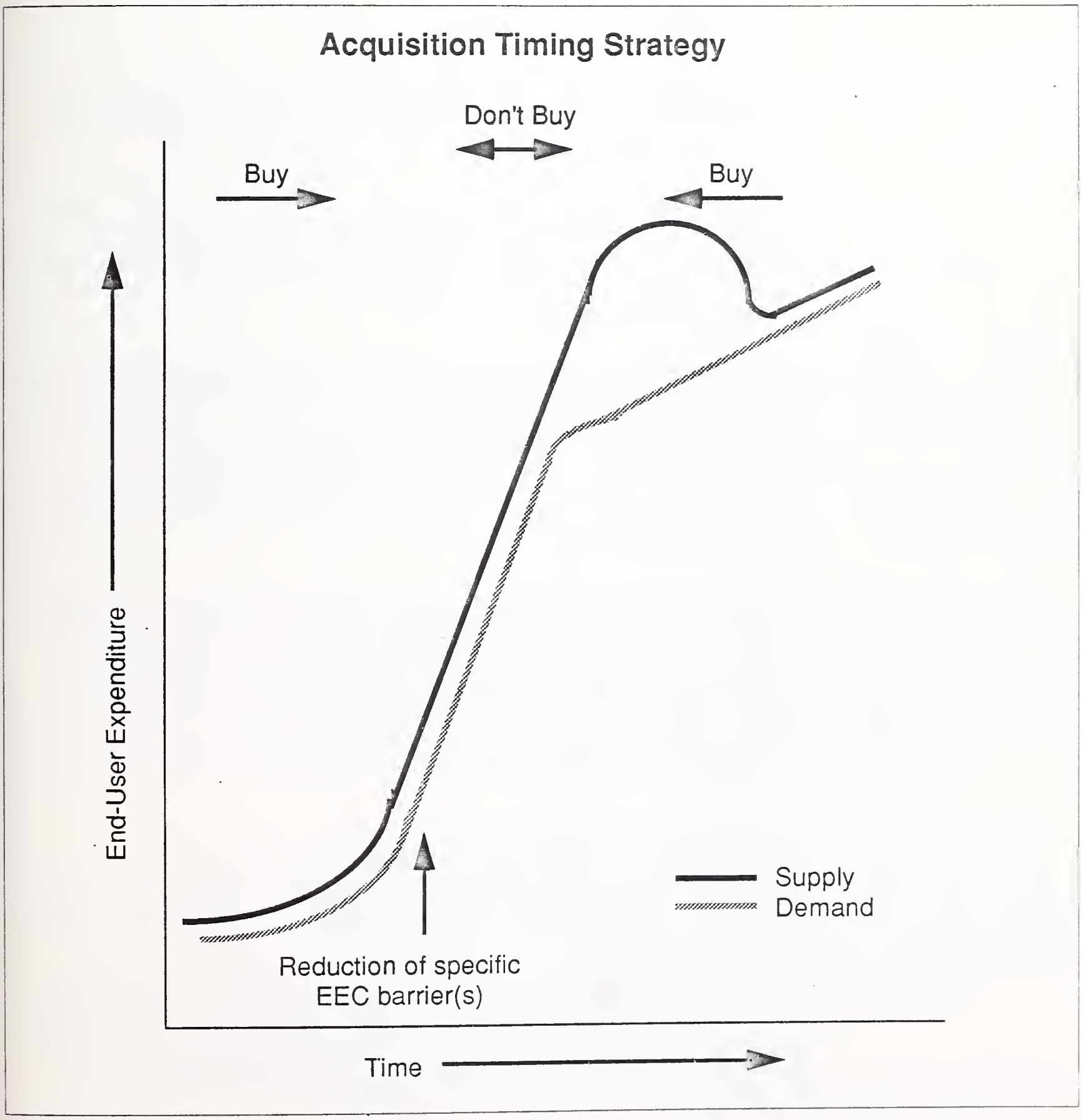
to acquire companies and times not to acquire, as is illustrated in Exhibit VIII-3. The worst time to buy is when the market is well aware of the potential impact of the Single European Act on a specific market sector.

EXHIBIT VIII-3



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In many market sectors, this period of high awareness has already arrived, thanks to the considerable media hype that the European Commission has generated about the Single European Act and 1992. Vendors wishing to enter specific markets that are likely to benefit from Single European Act legislation must therefore clearly assess whether it is best to buy now, when the asking price for any vendor company in this sector will be at a premium, or to wait in the hope that there will be a shakeout in a few years time when demand settles down to a constant pan-European level.

B

Resources

In the context of a more pan-European market, resources are a major issue for software and services vendors. In this context, resources refers to both people and money, for both vendors and their clients.

Different resources are needed to become more European than to remain domestic. This is just as true for clients as for vendors. Software and services vendors have expressed considerable concern over the growing shortage of skilled staff. Often they see that the move to more European markets will only make matters worse.

The critical shortage in staff is in experienced and capable managers. For any enterprise wishing to strike out from a protected national market into a freer, pan-European environment, different managers are needed with wider ranges of skills and abilities. A knowledge of more than one European language is a very desirable qualification. Even more essential is an ability to understand that different Europeans have different cultural attitudes and priorities.

As Exhibit VIII-4 illustrates, there are three principal cultures in Europe. In the south, there is the Latin mentality, exemplified by France with its love of logic and ordered philosophy. To the north, Germanic culture predominates, with desire for an ordered society and the need for efficiency. To the west, there is Britain, the only island state in the EEC, which still has a tendency to not fully understand the cultures of the other 11 member states, and which is therefore strong in individualism and pragmatism.

It would be too simplistic, even incorrect, to say that the other EEC nations were a combination of these three principal cultures. However in many cases, the cultures of the other EEC nations do reflect large parts of the nearest of the three principal cultures. Often the other nine nations have very different cultural driving forces, but they are not of major importance to the software and services industry. The only other culture that is of significant importance to the EEC software and services market is that of U.S. vendors. Simply stated, U.S. vendors believe, with some justification, that they are the biggest, and hence often the best.

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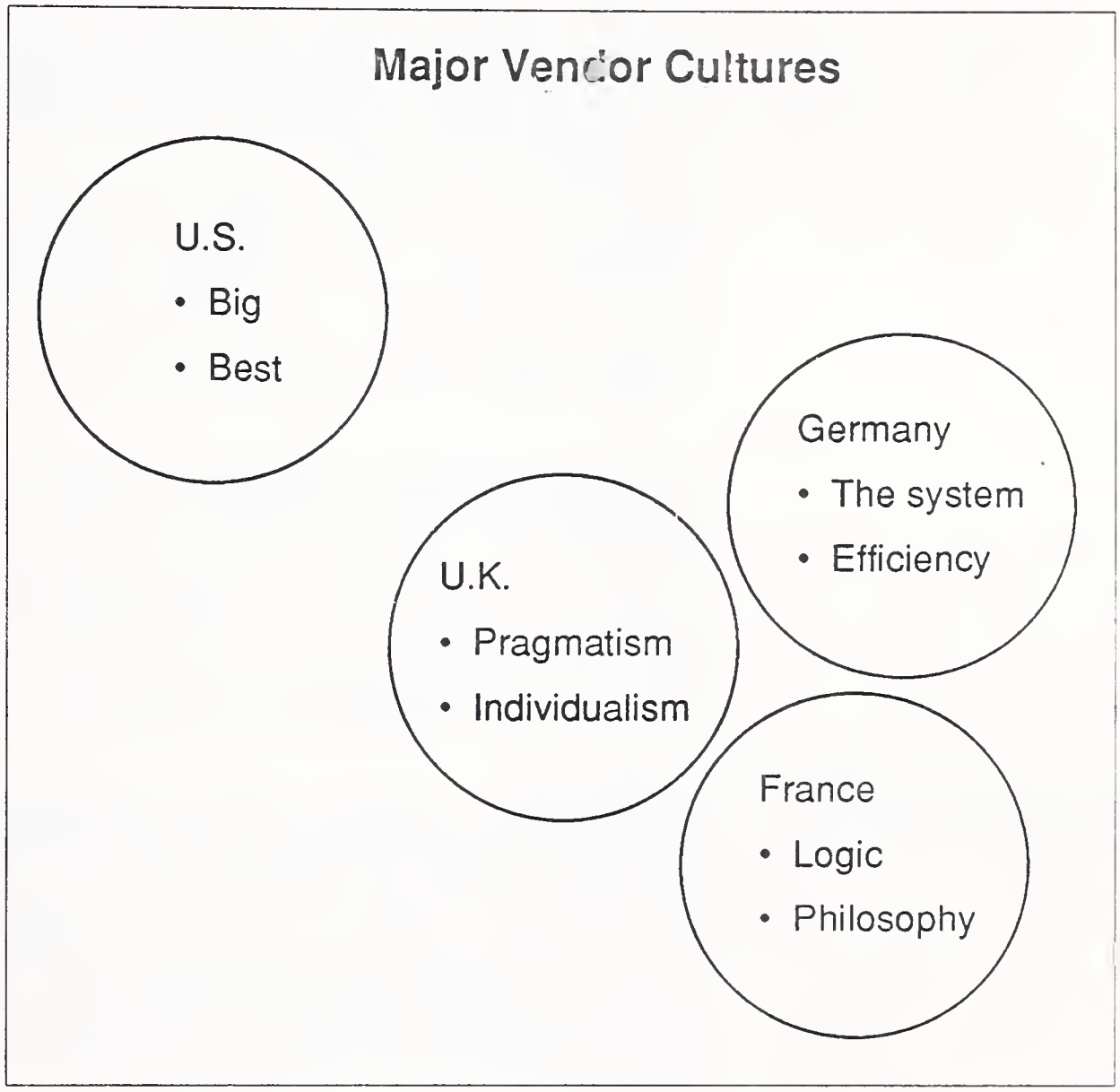
EXHIBIT VIII-4



The right staff, in particular managers, is only one-half of this resource issue. The other is money. Most software and services developments are not capital-intensive. It is very easy to set up a small professional services company. Developing software products needs more finance, but often finance is not a major issue to vendors seeking to develop new products. However, developing networks and systems integration services can be extremely capital-intensive.

The small- to medium-sized vendor with annual revenue of up to $10 million will not be in these capital-intensive areas. However, if the vendor is to expand into new pan-European markets, there will be demand for extra financial resources. Sales and marketing outlets will have to be established in each new country. Corporate management will have to be restructured and expanded. In addition, products and services will have to be modified, the minimum being screen and document translations to the new local language.

If vendors are experiencing high national growth rates with existing products, there is little desire, or resources with which to look to the

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wider European market. Many vendors with UNIX products and services currently find themselves in this enviable position. With 40 to 100 percent annual growth rates, these vendors find little time to do more than manage existing demand.

For such vendors, the right type of assistance can be extremely timely. Equipment vendors with good pan-European coverage are in the ideal position to help these vendors with soft loans, marketing advice, and foreign contacts. This they can do through well-thought-out Value-Added Reseller (VAR) programmes, as discussed below.

In addition to the possible financial problems that vendors might face in exploiting pan-European markets, their clients may well have the same, or even greater problems. Vendors have expressed fears to INPUT that many of their clients may be being pushed by the 1992 hype into expanding throughout Europe at a time when they can least afford to do so. Many may well over extend themselves financially, with disastrous effects for both themselves and the vendors who service them.

C

National Differences

It is easy in the case of Europe to forget that there are 12 very different nations in the EEC, all with separate history, cultures and expectations. As more and more individuals in the software and services industry become multilingual, the differences can fade into the background. However, one must understand that the differences involve not only language, but culture.

In the previous section, these cultural differences were touched upon. Any vendor seeking to expand into new national markets has to meet the challenge of managing new cultural relationships. These relationships can be considerably greater if the joining of different cultures is through mergers or acquisitions. All too easily, there can be nationalistic antagonism created through foreign acquisitions, if they are not managed with understanding and tact.

There are two principal causes of national differences between EEC software and services vendors:

- culture
- economics

Because of the principal historical cultural differences outlined in Exhibit VIII-4, certain nationalities tend to be better at providing specific software and services than others. It is well worth considering these differences, especially if one desired to acquire, or cooperate with, foreign vendors offering very specific skills.

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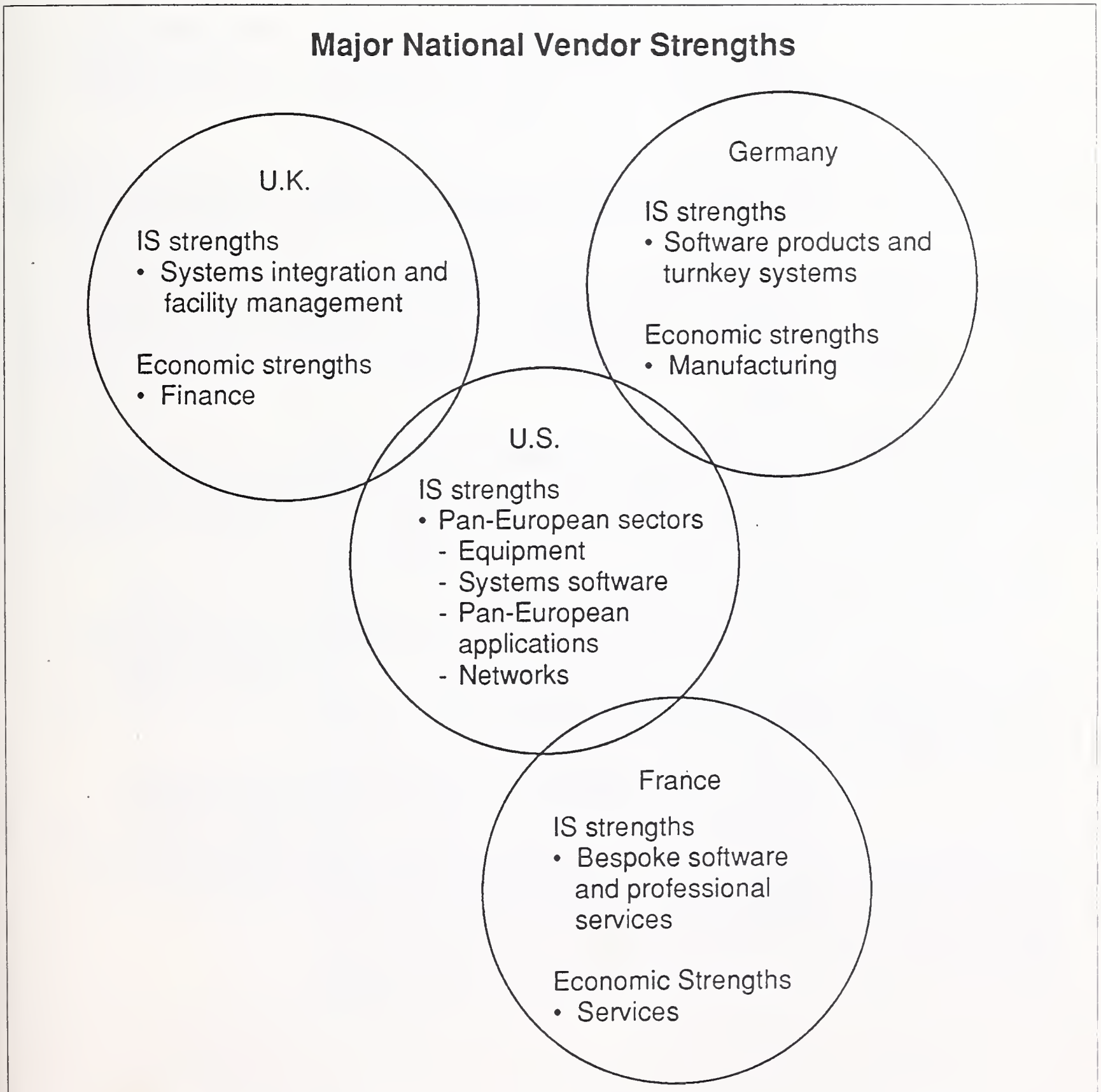
Exhibit VIII-5 illustrates the strengths of different vendor nationalities in different types of software and services. The French love for ordered philosophy leads them to be exceptionally good in analysing complex problems and developing bespoke solutions. It is therefore not surprising to see that French vendors such as Cap Gemini Sogeti and Sema Group are leading vendors in bespoke software and the professional services market.

EXHIBIT VIII-5



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The British, with their individualism, are also excellent at professional services, but at a more strategic, organisational level than the French. One therefore sees that the British have developed strong management consultants, such as PA and P-E, and auditing companies, like Price Waterhouse, which have moved into strategic software and services consultancy. Equally large U.K. vendors such as SD-Scicon and Logica are at the top of the European professional service market, and in particular the systems integration market, where management skills are premium. Also the British are very strong in systems operations, as this requires managerial skills. Hoskyns is the leading European vendor in this field.

It is interesting that Sema Group is a very recent merger between the French Sema Metra Group and the U.K. Cap Group. This new Anglo-French allegiance has brought together two complementary national skills into one major professional services vendor.

The Germans, with their expectations of high standards, have naturally developed their engineering skills in the software products market. West Germany can boast of the largest European-owned software products vendors, three of which are also equipment vendors in their own right. Siemens is Europe's largest software products vendor. Nixdorf and Mannesmann Kienzle are two of the EEC's largest turnkey vendors, selling their own application software on their own equipment. Software AG is the largest European-owned independent software products vendor.

U.S. vendors have targeted the large pan-European market sectors—hardware, system software, pan-European application software, and networks. IBM is the largest EEC vendor in all of INPUT's six delivery modes except for network services and turnkey systems.

In addition to these cultural strengths, each EEC state has certain economic strengths. These are also illustrated in Exhibit VIII-5. West Germany is strong in manufacturing; the U.K. is strong in finance (banking and insurance), and France is strong in services (transport, and central and local government).

These national economic strengths are reflected in the strengths of national software and services vendors. As the Single European Act breaks down national barriers, European vendors strong in these national markets should be the ones most likely to benefit from the wider pan-European opportunities, unless U.S. vendors use their superior pan-European strengths to take them over.

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D
Vendor Strategies

Vendors looking to exploit a more open European market place in the 1990s should set their strategic lines today. Although much of the Single European Act legislation will not take effect before the early to mid-1990s, it will take a vendor a number of years to establish the best organisation to fully exploit its chosen market sectors.

Exhibit VIII-6 lists INPUT's recommended strategic check-list for vendors for the 1990s. Careful consideration should be given to which countries and market sectors should be targeted, whether the Single European Act will affect them, and if so, when.

The best place in which to monitor developments in Single European Act legislation is Brussels. For any vendor seriously involved in market sectors that will be affected by the Single European Act, INPUT considers it essential to have some presence in Brussels. This may require keeping a full-time staff member in Brussels. However, for most vendors, regular trips to meet the relevant Director General staff will suffice.

It is essential that vendors fully understand how Single European Act legislation could affect their products and services directly, and indirectly through clients' needs. This will probably need in-depth market research, as these changes may be complex and difficult to anticipate.

Any vendor seeking to exploit high-profile pan-European market sectors has to monitor the competition very closely. The importance of the competitive threat is clearly illustrated in Exhibit VII-1, which shows that competition is second only to 1992 as vendors' prime issue for the 1990s. Such research should aim to seek out not only potential products and services modifications being made by competitors in the light of Single European Act legislation, but also to watch for weaknesses that might make these competitors vulnerable and easy targets for acquisition.

Product modifications might include new releases incorporating parameterisation, allowing easy redesign to new country standards. Another modification might be a move to a better pan-European equipment base, such as from one of the more restricted European equipment vendors to IBM or Digital. It could involve porting to UNIX.

A weakness could be overextension of resources in trying to become pan-European too early. Another weakness might be in trying to make such moves through new subsidiaries, rather than exploiting lower-risk, local third-party distributors. It could be through an overly ambitious acquisition programme, resulting in major management problems in merging and restructuring new assets.

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EXHIBIT VIII-6

Vendor Strategic Check-List for the 1990s

- Countries
  - Which ones are to be targeted?
  - What are the priorities?
- Markets
  - Will the client base be affected by the S.E.A.?
    - If yes, then what is the best estimate of timing by targeted country?
- Products/Services—Will products/services be:
  - Directly affected by the S.E.A.?
    - If yes, then what will be the effect and the likely modifications needed?
    - And the best estimate of timing by targeted country?
  - Indirectly affected through client demand?
    - If yes, then what will be the effect and the likely modifications needed?
    - And the best estimate of timing by targeted country?
- Competition
  - What is the most likely competition?
  - Are they vulnerable to being taken over?
    - If yes, by whom and when?
  - What are their strengths and weaknesses in a pan-European context?

INPUT recommends to vendors that whatever strategy they follow in looking to the 1990s and Europe, they do not overextend themselves and become vulnerable to being taken over. There will be many large

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vendors looking for cheap acquisitions during the next few years, and any vendor who becomes weak financially immediately becomes an easy target for a hostile takeover by some predatory competitor.

E

Vendor Recommendations

Exhibit VIII-7 lists the major issues facing all vendors in the EEC software and services market. In the 1990s, U.S. vendors will have an advantage over domestic EEC vendors because in certain market sectors U.S. vendors already have strong pan-European organisation and good pan-European coverage with their products and services.

EXHIBIT VIII-7

Major Issues Facing Vendors in the 1990s

- Strength of U.S. in pan-European markets
- Decline of equipment sales value, so that software and services become more important in the early 1990s
- High interest and potential competition in evolving pan-European markets
- Importance of international standards
- Relative weakness of European vendors in exploiting evolving pan-European markets

Equipment vendors are faced with the prospect of the value of equipment sales falling to under half the total value of delivered total solutions in the early 1990s. Equipment prices are constantly under downward pressure. In addition, the power of equipment platforms is improving every year. The result is that equipment vendors are looking increasingly to the software and services market.

INPUT expects that equipment vendors will increase their involvement in every software and services delivery mode in the 1990s. This means that independents will have strong competition in certain markets. The most suitable markets for the equipment vendors to attack will be pan-European.

The media hype about 1992 has made all vendors aware of the potential opportunities after 1992 within the EEC. There is therefore very high interest in those market sectors that should be positively affected by Single European Act legislation. Many vendors are already looking to these markets, and there will be considerable competition to control them.

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Many European vendors are in a relatively weak position to exploit these new pan-European markets. They may dominate their national equivalent today, but unless they carefully prepare for the expansion into a larger and far more complex and competitive pan-European environment, they might find it very difficult to exploit these markets on their own. The reality is that many European vendors might have to turn to other vendors to provide pan-European coverage. However, they should be aware of the possibility of a future takeover by their partner.

With U.S. vendors dominating the European equipment, network, and the few software products markets that are pan-European, there is an opportunity for them in other markets, once they become liberalised by Single European Act legislation. Today, U.S. vendors have 20 percent of the EEC software and services market and are the second largest national grouping after the French. Depending upon how fast pan-European markets evolve, and what the competition is from European vendors, they could become the largest.

The European Commission is promoting European interests. It is clear that protecting European industry from competition has failed to date, and that ultimately a strategy of letting the most competitive companies win should be good for the EEC as a whole. However, the result of this could be for certain domestic EEC industries to be extremely vulnerable during the transition from national to pan-European markets. The software and services industry is a prime example.

The Commission may consider measures to assist, or give limited protection to EEC-owned companies during this transition period. This has raised the spectre of "Fortress Europe" with the EEC's trading partners. The Commission therefore has to balance good trade relations with the desire for the domestic EEC business enterprises to get the major benefit from the Single European Act, not foreign competitors.

1. U.S. Vendors

U.S. vendors should look to capitalising on their prime strength, which is far better pan-European coverage than European vendors. Exhibit VIII-8 lists INPUT's recommendations to U.S. vendors.

They should consider how they can offer a truly pan-European service, whilst exploiting national markets through national expertise. This national expertise could be their own, or could be that of EEC-owned local vendors.

Very few European vendors have built up the pan-European organisations that most U.S. vendors can boast of. It is on these superior organisations that U.S. should build for the 1990s.

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EXHIBIT VIII-8

Recommendations to U.S. Vendors

- Target private market sectors rather than member state government, or European Commission markets
- Look to existing and evolving pan-European markets to capitalise on strengths in size and geographic coverage
- Improve geographic coverage to get best EEC coverage for individual products and services
- Develop a tiered organisation in which you develop pan-European products and services and look to national specialists to sell and support them
- Look to EEC national organisations to sell and support at the local level
- Consider the best way of controlling these nations—acquisition, part shares, joint ventures, strong reseller programmes
- Have a clear policy on UNIX and other international standards
- Keep in close contact with Brussels

2. EEC Vendors

Unlike U.S. vendors, EEC vendors are either heavily biased towards domestic European markets, or are only gradually attempting to become pan-European. Exhibit VIII-9 lists INPUT's recommendations to those EEC vendors targeting pan-European markets, and Exhibit VIII-10 lists recommendations to those planning to stay in national, niche markets.

For both classes of vendors, competition is very important. Every attempt should be made by these vendors to monitor competition, both direct nation competition and likely foreign competition. For many smaller vendors, this will be difficult to do whilst trying to maintain high-quality service to their existing clients. However difficult it may be, some attempt should be made to do so in the 1990s.

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EXHIBIT VIII-9

Recommendations to EEC Vendors Targeting Pan-European Market Sectors

- Review competitive position of other vendors in your target markets, especially U.S. vendors
- Be prepared for considerable competition in pan-European market sectors
- Look for cooperative ventures with like-minded European vendors so as to become as strong as possible
- Ensure sufficient financial resources
- Develop a clear European staff policy
- Have a clear policy on UNIX and other international standards
- Keep in close contact with Brussels

To exploit new pan-European markets, or to survive in existing domestic markets, EEC-owned vendors should consider expanding, perhaps through acquisition. More likely it could be through mergers, or cooperative agreements. The stronger a vendor is, the more likely that a hostile attack or acquisition bid can be warded off.

There is considerable merit in the idea of joining up with similar vendors in other EEC countries to form cooperative groups. If each member is in the same field, but intending to remain predominantly domestic, there can be great strength to such groupings, and little competitive threat, although organisational weaknesses can be a problem. The key is to adjust the organisation of such groupings to the merits of the clients.

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EXHIBIT VIII-10

Recommendations to EEC Vendors Targeting National Niche Market Sectors

- Review the competitive position of other vendors in your target markets, especially European vendors
- Be careful not to become dependent upon large pan-European vendors who might wish to assume control in the future
- Determine if vendors from other EEC member states are seeking to compete in your national target markets
- See how you can differentiate from the competition
- Determine the likelihood of your target markets being affected by Single European Act legislation and hence being targeted as evolving pan-European sectors
- Look to alliances with similar-sized vendors in other EEC states so as to increase your importance on the European scene without the risk of becoming pan-European
- Have a clear policy on UNIX and other international standards
- Monitor developments in Brussels

3. Equipment Vendors

The strengths of U.S. vendors can be very clearly seen in the equipment market. Vendors like IBM and Digital, and to a lesser extent Unisys and Hewlett-Packard, have excellent pan-European equipment bases from which they can attract the best European independents wishing to act as VARs, or from which to sell their own turnkey systems.

Exhibit VIII-11 lists INPUT's recommendations to equipment vendors. It is essential for any equipment vendor to build up the best possible pan-European base for each range of equipment that will be marketed. European equipment vendors have tended to be weak in this respect, and should give considerable thought as to how they can overcome this disadvantage by the early 1990s.

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EXHIBIT VIII-11

Recommendations to Equipment Vendors

- Try to develop the best pan-European coverage for each range of equipment platforms
- Decide whether you wish to sell equipment only, or become involved in the software and services market
- Develop a clear pan-European strategy towards each sector of the software and services market you wish to target
- Develop a clear strategy towards selling software and services to end users yourself, while at the same time using third parties to sell these on your equipment
- Look at these strategies from the viewpoint of the end user, rather than from your internal perspective
- If you plan to develop your own software and services and sell them using your own resources, consider the advantages of employing specialists from each national target market, rather than redeploying your own general staff
- If you plan to use third parties to sell, develop the most competitive pan-European VAR programme for each range of equipment
- Have a clear policy on UNIX and other international standards
- Keep in close contact with Brussels

With regard to being involved in the software and services market, equipment vendors can either be directly involved, selling their own products and services, or indirectly, through VARs. With the downward pressure on equipment prices likely to continue well into the 1990s, equipment vendors will see before 1992 that software and services will become the greater proportion of delivered total solutions. There are therefore considerable pressures for equipment vendors to move into total solutions themselves.

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The culture of many equipment vendors is not suitable for selling software and services, and careful consideration should be given to restructuring the marketing and sales for software and services so they can compete directly with independent software and services vendors.

Many equipment vendors will continue to use both their own direct sales forces and third parties. Many of these third parties will be VARs. Exhibit VIII-12 lists INPUT's recommendations for developing the best VAR programmes for the 1990s. This should be done for each major range of equipment—PC, workstation, minicomputer, UNIX, and proprietary operating system.

The intention should be to launch such VAR programmes as soon as possible and well before 1992.

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EXHIBIT VIII-12

Recommendations for Pan-European VAR Programmes

- Develop the best pan-European coverage of relevant equipment platforms
- Analyse competitive equipment vendors in your target markets and their policy on letting VARs take title to their equipment
- Decide whether you have any objection to letting VARs take title to your equipment
- Set up strong Channel Managers in each country to resolve any channel conflicts quickly and efficiently, regardless of whether the VAR takes title
- Look to building incentives into your VAR programme such as:
  - Assistance in moving into foreign markets with:
    - Contacts
    - Legal advice
    - Tax advice
    - Employment advice
    - Estate agents
    - Financial advice
    - Translation of promotional material
    - Identifying national competition
    - Marketing advice
    - Pricing advice
  - Assistance in redesigning products with:
    - Screen translation
    - Documentation translation
    - Meeting different standards
- Seek to tie your better VARs to your equipment through:
  - Soft development loans
  - Access to your staff benefits
  - Training and presentation facilities
  - Information about developments in Brussels

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4. Independent Vendors

Exhibit VIII-13 lists INPUT's recommendations to independent vendors. Independents should have a clear policy on whether they wish to attack pan-European markets or not. If the vendor is U.S., then the answer will probably be positive. If the vendor is European, then a move into pan-European markets should be questioned, unless the vendor's clients are all going pan-European and it is essential for the vendor to follow.

EXHIBIT VIII-13

Recommendations to Independent Vendors

- Develop a clear policy towards becoming involved in pan-European market sectors
- Seek to exploit the growing competition between equipment and network vendors to work with the better independents
- Try to become as important as possible in a European context so as to be able to command a high price with equipment vendors
- Have a clear policy on UNIX and other international standards
- Seek to exploit the growing competition between UNIX, IBM and Digital operating systems and pan-European standards
- Do not get tied to any specific equipment vendor
- Take care not to become financially weak and hence a prospective acquisition target
- Keep in close contact with Brussels
- Look for opportunities to assist non-EEC vendors who need representation within the EEC

Careful thought should be given to how the growing competition between equipment and network vendors for pan-European markets can be exploited. The higher profile the independent has, the better cooperation deals should be offered.

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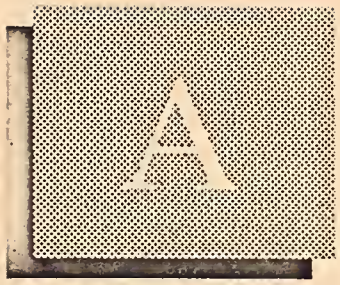
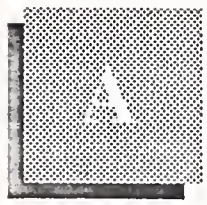


Appendix: Definition of Terms



Appendix: Definition of Terms

A

Revenue

- *Captive Computer Services Revenue* - Revenue received from users who are part of the same parent corporation as the vendors.
- *Noncaptive Computer Services Revenue* - Revenue received for computer services provided from users who are not part of the same parent corporation as the vendor.
- *Other Revenue* - Revenue derived from lines of business other than those defined above.
- *Total Company Revenue* - Revenue received from total computer services and other sources of revenue.
- *Total Computer Software and Services Revenue* - Revenue received from services provided by vendors that perform data processing using the vendors' computers (processing services), assist users to perform such functions on their own computers (software products and/or professional services), provide a combination of hardware and software integrated into a total system (turnkey systems), include consulting, education and training, programming analysis, and facilities management (professional services), provide for systems design, integration and installation (systems integration), or offer network, enhanced management services, electronic mail, electronic data interchange, or electronic information services (network services).

B

Service Modes

- *Processing Services*
  - Transaction Services: uses vendor equipment and software at vendor site or customer site; may be interactive or remote-batch-oriented.

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- Utility Services: access to basic software tools enabling the users to develop their own problem solutions (language compilers, assemblers, DBMS, sorts, scientific library routines, etc).

- Other Services: carry-in batch processing, computer output microfilm services (COM), data entry services, disaster recovery/backup services.

- Facilities Management (Systems Operations): vendor provides a complete operating information system for customer including equipment, software, personnel and facilities.

• *Professional Services* - Management consulting activity related to EDP systems consulting, production of custom software, education and training, and systems operations of client-owned computers (formerly identified as facilities management), where the vendor provides human resources to operate and manage the client facility.

• *Systems Integration* - Delivery of large, multidisciplinary, multivendor systems, incorporating some or all of these functions: systems design, programming, integration, equipment, networks, installation and acceptance. Systems can encompass multiple product delivery modes.

• *Software Products*

- Systems software and/or applications software packages purchased by users.

· Systems Software Products

Systems Control Software: operating systems, communications monitors, network control, library control, windowing, access control, security, etc.

Data Center Management Software: capacity management, scheduling, job accounting, performance monitors, tape management, utilities, downtime/repair monitoring management, etc.

Application Development Tools Software: application generators, assemblers, compilers, 4GLs, automated documentation, languages, translators, database management systems, data dictionaries.

· Applications Software Products

Cross-Industry Applications Software: used by clients in many or all vertical markets (i.e., payroll, word processing, spreadsheets, accounts receivable).

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Industry-Specific Applications Software: unique to a specific vertical market and sold into that market only (i.e., demand deposit accounting, MRP II, hospital patient tracking).

- *Network Services*

  - Network Management and Enhanced Services: network management functions, network transmission facilities, augmented with computerized switching and features such as packet switching, electronic mail, store-and-forward message switching, terminal interface and error detection and correction.

  - Network Applications

    · Electronic Data Interchange (EDI): application-to-application electronic communication, based on established business document standards.

    · E-Mail: a range of services that transmits documents consisting of text and graphic material to be read by a person—with the quality of document being high.

    · All other application services in which the network is the principal part of the service; e.g., electronic funds transfer and some videotex services.

- *Electronic Information Services*

  - Databases that provide specific information via terminal-based inquiry such as stock prices, legal precedents, economic indicators, airline schedules, etc.

  - News services that offer current information, either general or for a specific category; i.e., financial or political

  - Other services that provide interactive access to databases and offer the inquirer the capability to send as well as receive information for such purposes as home shopping, home banking, travel reservations, etc.

- *Turnkey Systems* - an integration of systems software, packaged or customized applications software, CPU, equipment, and peripherals. These systems are developed to meet a specific set of user requirements. The value added by the vendor is primarily in the software, either packaged or custom-developed. Most CAD/CAM systems and many small business systems are turnkey systems. This does not include specialized hardware systems such as word processors, cash registers, and process control systems.

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C

Other Considerations

When questions arise about the proper place to count certain user expenditures, INPUT addresses them from the user viewpoint. Expenditures are then categorised according to what users perceive they are buying.

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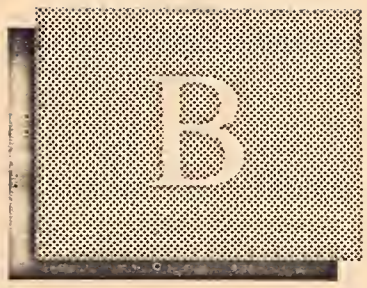
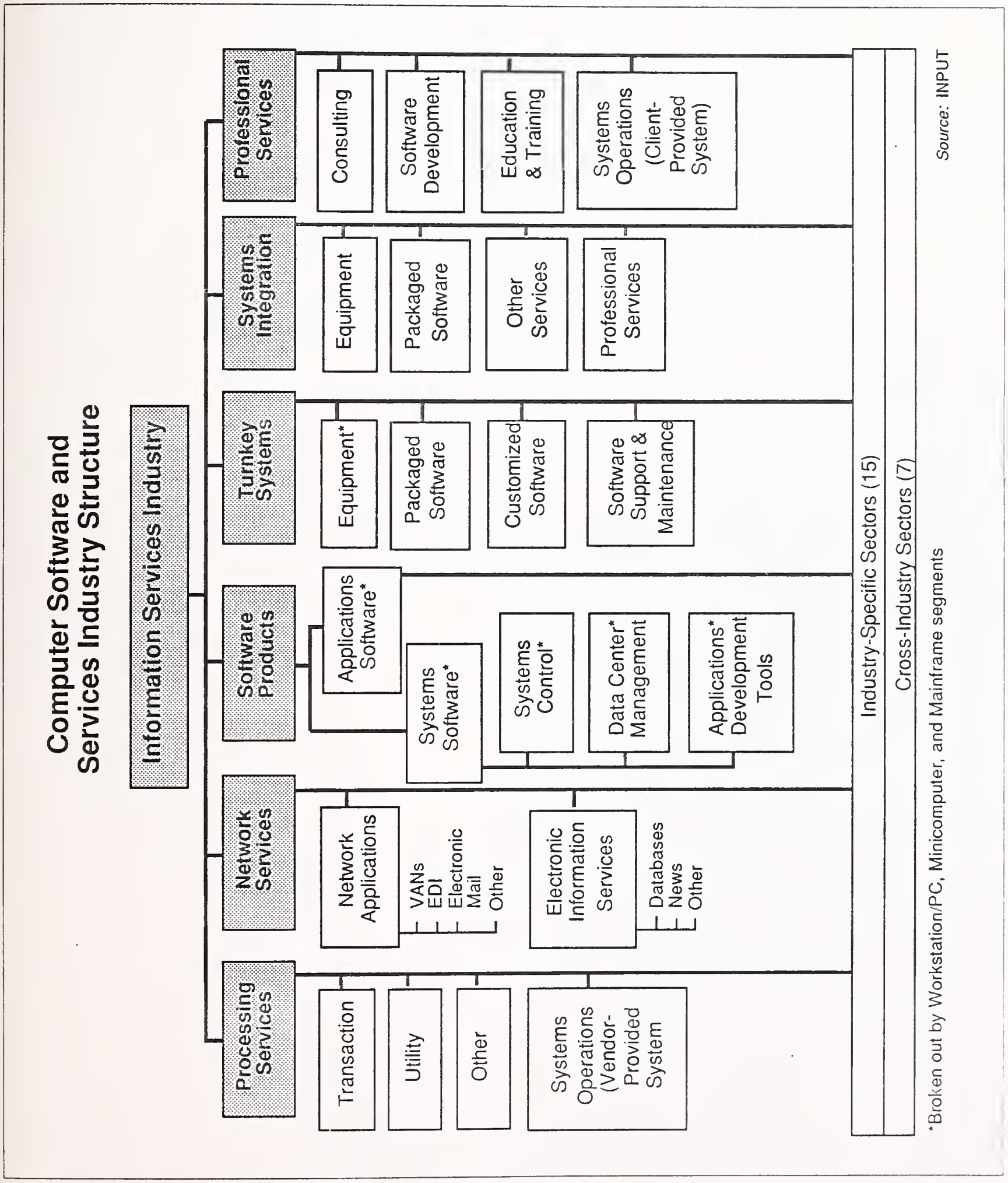


Appendix: Computer Software and Services Industry Structure

EXHIBIT B-1



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Appendix: U.S. Dollar and ECU Average Exchange Rates and 1989 Inflation Factors

EXHIBIT C-1

U.S. Dollar and ECU Average Exchange Rates and 1989 Inflation Factors

Country	Currency	Exchange Rates		1989 Inflation Assumptions (Percent)
		U.S. Dollars	ECU	
Belgium and Luxembourg	BF	40.5	43.5	+3.0
Denmark	DK	7.53	8.06	+4.8
France	FF	6.55	7.01	+3.5
Greece	DX	165	180	+13.0
Ireland	I£	0.72	0.77	+3.8
Italy	Lr	1,409	1,495	+6.5
Netherlands	Dfl	2.18	2.34	+1.1
Portugal	Es	160	174	+12.0
Spain	Ps	121	129	+6.3
United Kingdom	£	0.61	0.67	+7.7
West Germany	DM	1.93	2.07	+3.0

Source: Exchange rates - IMF (average rates for second quarter 1989)
Inflation - Barclays Bank (August 1989)

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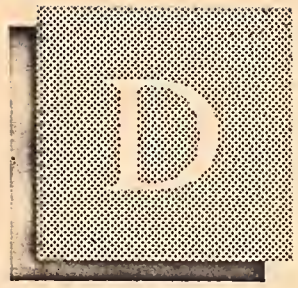

Appendix: Forecast Database in U.S. Dollars and ECUs

EXHIBIT D-1

EEC Software and Services Market Forecast by Market Segment, 1989-1994

Segment	U.S. Dollars Billions			ECUs Billions			1988-1989 Growth (Percent)	1989-1994 Growth (Percent)
	1988	1989	1994	1988	1989	1994		
Processing Services	5.9	6.3	8.5	5.5	5.9	7.9	6	6
Network Services	2.0	2.7	7.9	1.8	2.5	7.3	36	24
Software Products	10.2	12.6	30.8	9.5	11.8	28.8	23	20
Professional Services	11.3	13.7	34.6	10.6	12.8	32.3	21	20
Systems Integration	1.4	1.8	5.7	1.3	1.6	5.3	28	26
Turnkey Systems	6.2	7.0	16.9	5.8	6.5	15.7	15	19
Total	37.0	44.1	104.4	34.5	41.1	97.3	19	19

EXHIBIT D-2

Software and Services Market Forecast by Market Segment, 1989-1994—France

Segment	U.S. Dollars Billions			ECUs Billions			1988-1989 Growth (Percent)	1989-1994 Growth (Percent)
	1988	1989	1994	1988	1989	1994		
Processing Services	1.7	1.7	2.1	1.6	1.6	2.0	3	4
Network Services	0.5	0.7	2.0	0.5	0.6	1.8	32	24
Software Products	2.8	3.4	8.4	2.6	3.2	7.9	23	20
Professional Services	3.7	4.6	11.9	3.5	4.3	11.2	22	21
Systems Integration	0.3	0.4	1.4	0.3	0.4	1.3	26	28
Turnkey Systems	1.1	1.2	3.1	1.0	1.2	2.9	16	20
Total	10.1	12.1	28.9	9.5	11.3	27.1	19	19

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EXHIBIT D-3

Software and Services Market Forecast by Market Segment, 1989-1994—West Germany

Segment	U.S. Dollars Billions			ECUs Billions			1988-1989 Growth (Percent)	1989-1994 Growth (Percent)
	1988	1989	1994	1988	1989	1994		
Processing Services	1.4	1.5	1.8	1.3	1.4	1.7	5	5
Network Services	0.3	0.4	1.4	0.3	0.4	1.4	44	27
Software Products	2.1	2.6	6.2	2.0	2.4	5.8	23	19
Professional Services	1.8	2.1	5.0	1.7	2.0	4.7	19	19
Systems Integration	0.3	0.5	1.5	0.3	0.4	1.3	27	26
Turnkey Systems	2.2	2.4	5.6	2.0	2.3	5.2	12	18
Total	8.1	9.5	21.5	7.6	8.9	20.1	17	18

EXHIBIT D-4

Software and Services Market Forecast by Market Segment, 1989-1994—United Kingdom

Segment	U.S. Dollars Billions			ECUs Billions			1988-1989 Growth (Percent)	1989-1994 Growth (Percent)
	1988	1989	1994	1988	1989	1994		
Processing Services	0.9	1.0	1.5	0.8	0.9	1.4	12	8
Network Services	0.7	0.9	2.5	0.6	0.8	2.3	31	22
Software Products	1.8	2.2	5.4	1.7	2.1	5.0	23	20
Professional Services	2.3	2.9	7.1	2.1	2.7	6.6	23	20
Systems Integration	0.4	0.5	1.6	0.4	0.5	1.4	26	24
Turnkey Systems	1.6	1.8	4.3	1.4	1.6	3.9	13	20
Total	7.7	9.3	22.4	7.0	8.6	20.6	21	19

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EXHIBIT D-5

Software and Services Market Forecast by Market Segment, 1989-1994—Italy

Segment	U.S. Dollars Billions			ECUs Billions			1988-1989 Growth (Percent)	1989-1994 Growth (Percent)
	1988	1989	1994	1988	1989	1994		
Processing Services	0.8	0.8	1.2	0.7	0.8	1.2	10	8
Network Services	0.2	0.3	0.9	0.2	0.3	0.9	41	23
Software Products	1.7	2.2	5.6	1.6	2.1	5.2	24	20
Professional Services	1.5	1.8	4.6	1.4	1.7	4.3	23	21
Systems Integration	0.1	0.2	0.6	0.1	0.1	0.5	20	28
Turnkey Systems	0.5	0.5	1.3	0.4	0.5	1.2	16	19
Total	4.8	5.8	14.2	4.4	5.5	13.3	21	19

EXHIBIT D-6

Software and Services Market Forecast by Market Segment, 1989-1994—Netherlands

Segment	U.S. Dollars Billions			ECUs Billions			1988-1989 Growth (Percent)	1989-1994 Growth (Percent)
	1988	1989	1994	1988	1989	1994		
Processing Services	0.4	0.4	0.5	0.4	0.4	0.5	8	6
Network Services	0.1	0.1	0.4	0.1	0.1	0.3	33	22
Software Products	0.6	0.8	1.9	0.5	0.7	1.7	24	19
Professional Services	0.8	1.0	2.4	0.7	0.9	2.2	18	22
Systems Integration	0.1	0.1	0.2	0.1	0.1	0.2	30	24
Turnkey Systems	0.3	0.3	0.8	0.3	0.3	0.7	14	20
Total	2.3	2.7	6.2	2.1	2.5	5.6	18	18

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EXHIBIT D-7

Software and Services Market Forecast by Market Segment, 1989-1994—Belgium and Luxembourg

Segment	U.S. Dollars Billions			ECUs Billions			1988-1989 Growth (Percent)	1989-1994 Growth (Percent)
	1988	1989	1994	1988	1989	1994		
Processing Services	0.2	0.2	0.3	0.2	0.2	0.3	6	5
Network Services	≈	0.1	0.2	≈	0.1	0.2	38	25
Software Products	0.4	0.5	1.1	0.3	0.4	1.0	23	19
Professional Services	0.4	0.5	1.2	0.4	0.4	1.1	20	20
Systems Integration	0.1	0.1	0.2	≈	0.1	0.2	26	24
Turnkey Systems	0.1	0.2	0.4	0.1	0.1	0.4	15	20
Total	1.2	1.4*	3.4	1.1*	1.3	3.2	19	19

* Column does not add due to rounding errors
≈ Less than 0.05

EXHIBIT D-8

Software and Services Market Forecast by Market Segment, 1989-1994—Spain

Segment	U.S. Dollars Billions			ECUs Billions			1988-1989 Growth (Percent)	1989-1994 Growth (Percent)
	1988	1989	1994	1988	1989	1994		
Processing Services	0.2	0.2	0.4	0.2	0.2	0.4	14	13
Network Services	≈	0.1	0.3	≈	0.1	0.3	50	29
Software Products	0.4	0.5	1.2	0.4	0.5	1.1	25	22
Professional Services	0.4	0.4	1.3	0.3	0.4	1.2	25	23
Systems Integration	≈	0.1	0.2	≈	0.1	0.2	35	27
Turnkey Systems	0.2	0.3	0.7	0.2	0.3	0.7	14	20
Total	1.2	1.5*	4.0*	1.1	1.4*	3.8*	24	22

* Column does not add due to rounding errors
≈ Less than 0.05

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EXHIBIT D-9

Software and Services Market Forecast by Market Segment, 1989-1994—Denmark

Segment	U.S. Dollars Billions			ECUs Billions			1988-1989 Growth (Percent)	1989-1994 Growth (Percent)
	1988	1989	1994	1988	1989	1994		
Processing Services	0.4	0.4	0.5	0.3	0.3	0.5	3	6
Network Services	≈	≈	0.2	≈	≈	0.2	40	27
Software Products	0.3	0.3	0.8	0.2	0.3	0.8	23	20
Professional Services	0.3	0.3	0.7	0.2	0.3	0.7	20	20
Systems Integration	≈	≈	0.1	≈	≈	0.1	21	24
Turnkey Systems	0.2	0.2	0.5	0.2	0.2	0.4	14	21
Total	1.1*	1.2	2.7*	0.9	1.1	2.5*	16	17

* Column does not add due to rounding errors
≈ Less than 0.05

EXHIBIT D-10

Software and Services Market Forecast by Market Segment, 1989-1994—Ireland, Portugal and Greece

Segment	U.S. Dollars Billions			ECUs Billions			1988-1989 Growth (Percent)	1989-1994 Growth (Percent)
	1988	1989	1994	1988	1989	1994		
Processing Services	0.1	0.1	0.1	0.1	0.1	0.1	10	12
Network Services	≈	≈	0.1	≈	≈	0.1	47	30
Software Products	0.1	0.1	0.4	0.1	0.1	0.4	23	21
Professional Services	0.1	0.1	0.3	0.1	0.1	0.3	24	22
Systems Integration	≈	≈	0.1	≈	≈	0.1	25	30
Turnkey Systems	0.1	0.1	0.2	0.1	0.1	0.2	14	20
Total	0.4	0.5*	1.2	0.4	0.5*	1.2	20	21

* Column does not add due to rounding errors
≈ Less than 0.05

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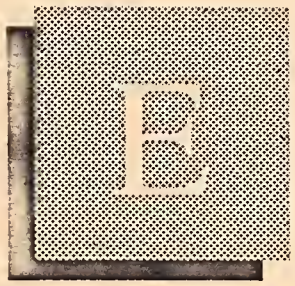
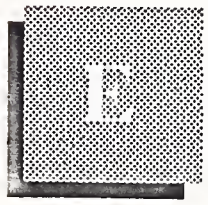


Appendix: Vendor Questionnaire



Appendix: Vendor Questionnaire

Ql. Firstly, I would just like to establish (or confirm) the current geographical extent of your company. What countries do you have subsidiaries or other representation in?

Country	HQ	Subsidiary (100% ownership)	Other Representation Please define
West Germany France U.K. Italy Belgium/Lux Holland Denmark Spain Portugal Ireland Greece			
Sweden Norway Finland			
Switzerland Austria			
U.S. Japan Other (Please state)			

Comments: _____

_____

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Q2. Clearly there are many different pressures/challenges facing computer services vendors in the business/marketing environment—one of which is potentially the challenge of 1992.

Could you please tell me what you consider to be the top 3 (pressures/challenges) to your business?

1. _____

2. _____

3. _____

Comments: _____

_____

_____

Q3. How would you describe your company's overall reactions to the challenge of the single market opportunity (the 1992 initiative)?

5 Very Strong Importance/Interest
4 Strong Importance/Interest
3 Moderate Importance/Interest
2 Low Importance/Interest
1 Irrelevant Importance/Interest

Comments: _____

_____

_____

Interviewers Rating ☐

I would now like to try and assess your views with respect to the effects of the SEA on your business, classified into three broad areas:

i) Effects on the overall business environment

ii) Effects on target industries that create opportunities for your firm

iii) Effects on your business directly

(It is possible for one piece of legislation to be cited in more than one category.)

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Q4. Firstly those aspects of the SEA that affect *the overall business environment* —how important are they, do you think, in their impact on your business? Please rate on a scale of 1 - 5 where 1 is no impact and 5 is very strong impact

Rating 1 - 5

Removal of physical barriers
- goods _____
- people _____
Removal of fiscal barriers _____
Removal of technical barriers _____
- (standards harmonisation)
Creation of larger home market _____
will give a strategic/competitive
advantage over competition.
Broader public sector procurement _____
Telecomms liberalisation* _____
Freedom of establishment _____
Wider recognition of qualifications _____
Alignment of indirect taxation (VAT) _____
Harmonisation of labour force rights _____
Competition policy _____

* NB: Not strictly part of SEA

Others (please define) _____ _____
_____ _____

Comments: _____

_____

_____

Q5.

a) Are you aware of any legislation/regulatory change that affects any *industries* or *sectors* that you target?

Yes No Don't Know

b) If Yes, what legislation, what industry and what do you consider to be the opportunity that it is creating? (e.g., regulations relating to public sector procurement)

Legislation _____
Industry* _____
Opportunity _____

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Comments: _____

_____

_____

* Industry or Cross-Industry Opportunity

Industry-Specific

- ☐ Manufacturing
  - Discrete
  - Process
- ☐ Distribution (Retail and Wholesale)
- ☐ Transportation
- ☐ Banking and Finance
- ☐ Insurance
- ☐ Government
  - National
  - Local
- ☐ Services
- ☐ Other

Cross-Industry

- ☐ Accounting
- ☐ Engineering/Scientific
- ☐ Education/Training
- ☐ Human Resources
- ☐ Planning/Analysis
- ☐ Systems Software
- ☐ Utility Processing
- ☐ Network Services

Q6.

a) Are you aware of any legislation/regulatory change that affects your organisation directly?

Yes No Don't Know

b) If Yes what are they and what affect are they having on the business?

Customer Service Related Changes:
- Single Administrative Document
- Equipment Standards
- VAT Harmonisation

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Q7. I would like to get your views concerning the extent to which the development of a community-wide market might be *slow* to develop in the *software and services business*.

a) For example, what do you think will continue to represent a problem to your organisation for *national market entry*?

_____

_____

_____

b) For pan-European *product/service development*?

_____

_____

_____

c) For any other aspect of business, e.g., raising finance, M&A, distribution, etc.

_____

_____

_____

Q8. Specifically could you give me a rating on a scale of 1-5 (where 1 is no impact and 5 is very strong impact) on the strength of the following factors as inhibitors of the development of a single European market

	Rating 1 - 5
- Different languages	_____
- Different media (TV, Radio, Press)	_____
- Different business practices	_____
- Different consumer tastes and habits	_____
- Freedom to live and work de jure not de facto	_____
- Lack of central administrative power	_____
- Lack of central fiscal power (e.g., inability or unwillingness of all countries to be part of EMS)	_____
- Lack of single currency	_____

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- Continuation of customs controls at national borders due to slowness of national governments to harmonise taxes _____
- Any remaining technical barriers to trade in goods or services _____

Q9.

a) Do think that there are already some relatively unified markets within the computer industry at the supra-national level (e.g., perhaps mainframe computers), therefore implying little change?

If so, what are they: _____

_____

_____

Comments: _____

_____

_____

b) If not now, what sectors will be pan-European in 5 years time, in your opinion?

_____

_____

Comments: _____

_____

_____

Q10. What do you consider to be the principal benefits (if any) for your organisation that result from the SEA (1992 initiative)?

1. _____
2. _____
3. _____

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Comments: _____

_____

_____

Q11. What do you consider to be the principal threats (if any) for your organisation that result from the SEA?

1. _____

2. _____

3. _____

Comments: _____

_____

_____

As a result of the SEA (1992 initiative), are you instigating specific actions in your organisation?

Q12.

a) For example in your products/service offerings?

_____

_____

_____

b) In your marketing?

_____

_____

_____

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c) In any other aspect of your business?

_____

_____

_____

General Comments: _____

_____

_____

Q13.

a) What are the technical standards being introduced, through EEC harmonisation or otherwise, that are or will affect your operations?

_____

_____

_____

e.g.,

Telecommunications
- X.400
- EDIFACT
- ISDN standardisation
- etc.

Harmonisation of specific technical standards (and the appropriate conformance testing and certification) for:
- Voltage
- Wiring
- Safety
- Performance
- Environmental Requirements

Quality/Good Manufacturing (Service) Practice:
- ISO 9000 (BS 5750)
- Quality Standards for Software

De facto Standards:
- UNIX
- OSI
- MAP

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b) What effect are these standards having on your organisation and its activities?

Q14.

a) Finally, I would like to ask you whether you are involved, or plan to be involved in any EEC-funded or supported initiatives?

b) How important do you think they are in contributing to the development of the European industry?

eg.

ESPRIT	(European Strategic Programme for IT)
RACE	(Research & Development in Advanced Communications Technologies for Europe)
BRITE	(Basic Research in Industrial Technologies for Europe)
DELTA	(Development of European Learning through Technological Advance)
EUREKA	(Collaborative High-Tech projects—not specifically EEC)
INSIS	(The EEC's Inter-Institutional Information System)
CADDIA	(Cooperation in Automation of Data and Documents)
TEDIS	(Trade Electronic Data Interchange System)
STAR	(Special Telecommunications Actions for Regional Development)
SME	Task force (Initiatives to foster the development of small and medium- sized enterprises.)

The Development of an Electronic Information Service

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Q15. Is there any other subject related to the development of the Single European market that we have not discussed but which you think is important?

_____

_____

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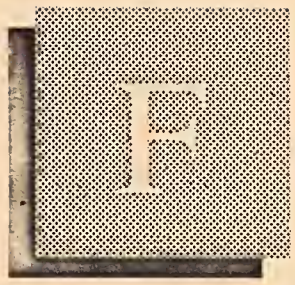
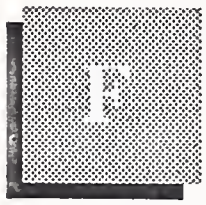


Appendix: EEC Chronology, 1946-1986



Appendix: EEC Chronology, 1946-1986

September 1946	Churchill makes speech in Zurich calling for a United States of Europe
May 1950	Robert Schuman proposes the European Coal and Steel Community (ECSC)
April 1951	The Treaty of Paris, to set up the ECSC, is signed by France, Germany, Italy, the Netherlands, Belgium, and Luxembourg
April 1954	Failure of the European Defence Community
May 1956	Approval of the Spaak Report advocating European union
October 1956	The United Kingdom rejects the Spaak Report in preference for a free trade area
March 1957	The Treaty of Rome creates the European Economic Community (EEC) with the six members of the ECSC
January 1958	The EEC comes into being
June 1959	Greece applies for associate EEC membership
July 1959	Turkey applies for associate EEC membership
May 1960	Formation of the European Free Trade Association (EFTA) with Austria, Denmark, Norway, Portugal, Sweden, Switzerland, and the United Kingdom
July 1961	Greece signs an association agreement with a view to subsequent full membership
August 1961	Ireland, Denmark and the United States apply for full membership

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April 1962	Norway applies for full membership
February 1962	Spain applies for associate membership
May 1962	Portugal applies for associate membership
January 1963	General de Gaulle voices doubts of the political will of the United Kingdom to join, and all enlargement negotiations break down
January 1963	France and Germany sign a further treaty of friendship and cooperation
August 1963	Turkey signs association agreement
March 1965	Proposal by the EEC to give wider political and economic power to its institutions
June 1965	France very hostile to proposals, and boycotts all Community meetings for the next seven months
January 1966	The Luxembourg compromise enables France to resume normal business
April 1967	Association with Greece frozen due to military coup in that country
May 1967	The United Kingdom reapplies for full membership, followed by Ireland, Denmark and eventually Norway. Hostility from the French government means they are left suspended
July 1967	Treaty establishes a single council unifying the ECSC, Euratom, and the EEC
July 1968	Completion of the customs union
February 1970	Agreement to short-term monetary support system
October 1970	Agreement for periodic meetings of foreign ministers
June 1970	Renewal of enlargement negotiations
January 1972	Treaties of Accession signed, but rejected by referendum in Norway
April 1972	Adoption of "snakes" to limit fluctuation of exchange rates
January 1973	EEC enlarged to nine with accession of Denmark, Ireland and the United Kingdom
January 1973	Free trade agreements with remaining EFTA countries.
December 1973	Beginning of common energy policy in face of oil crisis

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April 1974	Labour party wins United Kingdom general election and seeks renegotiation of terms of entry
December 1974	Establishment of the European Council, regular meetings of the heads of state of EEC member countries
March 1975	Solution reached to the high British contribution to the Community budget
June 1975	Referendum in the United Kingdom votes by large majority to continue membership
June 1975	Greece applies for full membership
July 1975	The Treaty of Brussels establishes the court of auditors
December 1975	Agreement for the European Parliament to be established by universal suffrage
December 1975	The Tindemans report proposes full European union but no action is taken
March 1977	Portugal applies for full membership
July 1977	Spain applies for full membership
December 1978	Final agreement on a European Monetary System (EMS)
April 1979	The EMS is established, but not joined by the United Kingdom
May 1979	Treaty of accession of Greece
June 1979	First elections to the European Parliament
February 1980	Inauguration of Euronet-Diane telecommunications network
May 1980	Resolution (again) of the United Kingdom budgetary crisis by reducing U.K. contributions; the search for a long-term solution
October 1980	Steel production quotas fixed to tackle steel industry crisis
January 1981	Greece becomes full member and the EEC extends to ten
January 1981	The European Currency Unit (ECU) comes into use
June 1981	Severe economic crisis throughout the EEC

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February 1982	Greenland, which has joined as part of Denmark, withdraws from the EEC as a result of referendum
January 1983	Establishment of common fisheries policy
May 1983	Proposals to tackle growing budgetary crisis, with deadline for agreement set for end of 1984
February 1984	European Parliament adopts European Union Treaty, which is considered a draft constitution
February 1984	Adoption of the Esprit programme for research and development
March 1984	Reforms to common agricultural policy introduced
June 1984	Second elections to the European Parliament
June 1984	Final resolution of the U.K. budget contribution problem enables solution of budgetary crisis
January 1985	First European passports issued
June 1985	Signature of treaty of accession of Spain and Portugal
June 1985	The Commission sends the Council of Ministers the White Paper on the completion of the internal market, commonly referred to as "The Cockfield White Paper"
January 1986	Spain and Portugal join and the EEC extends to twelve members
January 1986	Crisis in common agricultural policy
February 1986	Signature of the Single European Act

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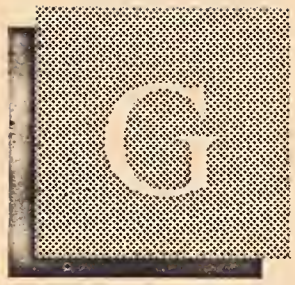
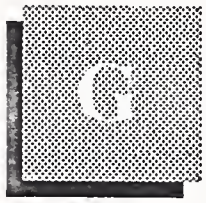


Appendix: Extracts from the Treaty of Rome



Appendix: Extracts from the Treaty of Rome

The right of establishment and freedom to provide services (i.e., the freedom to provide services in another Community Member State without being established there) were among the principal freedoms guaranteed by the Treaty of Rome in 1957, the other principal provisions being the free movement of goods, the free movement of workers and the free circulation of capital. For the right of establishment and the freedom to provide services the principal articles of the Treaty are Articles 52, 58, 59 and 60.

Article 52 reads as follows:

"Within the framework of the provisions set out below, restrictions on the freedom of establishment of nationals of a Member State in the territory of another Member State shall be abolished by progressive stages in the course of a transitional period. Such progressive abolition shall also apply to restrictions on the setting up of agencies, branches or subsidiaries by nationals of any Member State established in the territory of any Member State.

Freedom of establishment shall include the right to take up and pursue activities as self-employed persons and to set up and manage undertakings, in particular companies or firms within the meaning of the second paragraph of Article 58, under the conditions laid down for its own nationals by the law of the country where such establishment is effected, subject to the provisions of the Chapter relating to capital."

Article 58 reads as follows:

"Companies or firms formed in accordance with the law of a Member State and having their registered office, central administration or principal place of business within the Community shall, for the purpose of this Chapter, be treated in the same way as natural persons who are nationals of Member States.

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'Companies or firms' means companies or firms constituted under civil or commercial law, including cooperative societies, and other legal persons governed by public or private law, save for those which are non-profit making."

Article 59 states as follows:

"Within the framework of the provisions set out below, restrictions on freedom to provide services within the Community shall be progressively abolished during the transitional period in respect of nationals of Member States who are established in a state of the Community other than that of the person for whom the services are intended.

The Council may, acting unanimously on a proposal from the Commission, extend the provisions of this chapter to nationals of a third country who provide services and who are established within the Community."

Article 60 provides in part as follows:

"Services shall be considered to be 'services' within the meaning of this Treaty where they are normally provided for remuneration insofar as they are not governed by the provisions relating to freedom of movement of goods, capital and persons.

Without prejudice to the provisions of the Chapter relating to the right of establishment, the person providing a service may, in order to do so, temporarily pursue his activity in the state where the service is to be provided, under the same conditions as are imposed by that state on its own nationals."

For the abolition of restrictions on establishment and freedom to provide services, the Treaty provided for the drawing up of a general programme for the abolition of existing restrictions (Articles 54 and 63) and for the gradual abolition thereafter of those restrictions by means of directives.

In addition, it should be noted that in order to make it easier for persons to take up and pursue activities as self-employed persons, Article 57 provides for the issue of directives for "mutual recognition of diplomas, certificates and other evidence of formal qualifications" as well as for "the coordination of the provisions laid down by law, regulation or administrative action in Member States concerning the taking up and pursuit of activities as self-employed persons."

The competition rules, Articles 85 and 86, are applicable to the provision of services in the same way that they are applicable to the production and distribution of industrial goods.

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Article 85 provides as follows:

"1. The following shall be prohibited as incompatible with the common market: all agreements between undertakings, decisions by associations of undertaking and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market, and in particular those which:

a) directly or indirectly fix purchase or selling prices or any other trading condition;

b) limit or control production, markets, technical development, or investment;

c) share markets or source of supply;

d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;

e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

2. Any agreements or decisions prohibited pursuant to this Article shall be automatically void.

3. The provisions of paragraph 1 may, however, be declared inapplicable in the case of:

- any agreement or category of agreements between undertakings;
- any decision or category of decisions by associations of undertakings;
- any concerted practice or category of concerted practices which contributes to improving the production or distribution of goods or in promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and which does not:

a) impose on the undertaking concerned restrictions which are not indispensable to the attainment of these objectives;

b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question."

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Article 86 provides as follows:

"Any abuse by one or more undertakings of a dominant position within the Common Market or in a substantial part of it shall be prohibited as incompatible with the Common Market insofar as it may affect trade between Member States.

Such abuse may, in particular, consist in:

a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;

b) limiting production, markets or technical development to the prejudice of consumers;

c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;

d) making the conclusion of contracts subject to acceptance by the other parties' supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts."

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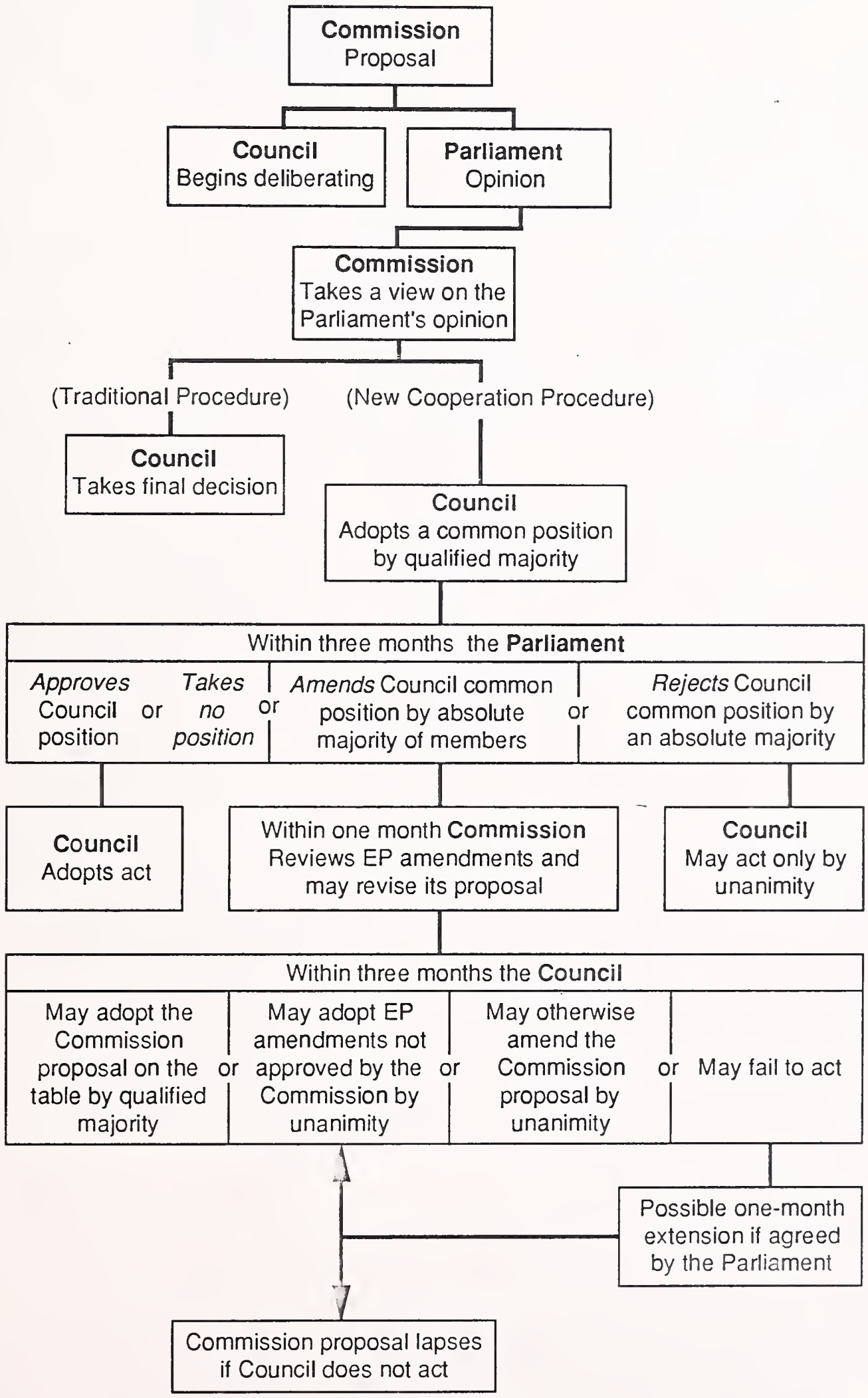
Appendix: EEC Legislative Process

EXHIBIT H-1

EEC Legislative Process



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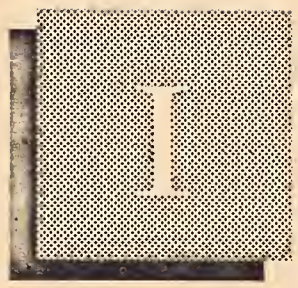
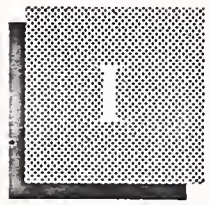


Appendix: European Commission Initiatives—Research and Development Programmes



Appendix: European Commission Initiatives—Research and Development Programmes

There has been a tendency for member states to provide financial support to uncompetitive industries and enterprises which not only distort competition but in the long run undermine European competitiveness. National sectorial support schemes, such as those for supporting research and development in information technology, will require the consent of the European Commission for their implementation, and many of the existing schemes will not be repeated. Such schemes will in general be replaced by research projects such as ESPRIT and RACE, implemented on an EEC basis.

The industrial policy of the EEC has had two main programmes, one to assist ailing industries such as textiles, shipbuilding and steel to restructure, and the other to assist in the development of new technologies to provide the foundation for future growth, initially confined to the nuclear energy industry. It was not until the early 1980s that it was realised that Europe was falling behind the U.S. and Japan and was also in danger of being by-passed by emerging technological countries such as Korea, Taiwan and Singapore. As a result, a serious balance-of-payments deficit was developing in such sectors as domestic entertainment products and information technology. It was not that European research was insufficient (in some areas it surpassed that of its competitors), rather, the research was carried out in a large number of unconnected industries and universities in different countries, and was therefore ineffective.

The European Commission's objective was to stimulate cooperation between industries and universities throughout Europe in the development of new technologies and new products to meet the needs of the future and thereby create employment. Hence projects are designed to foster precompetitive research and development, the "precompetitive" condition being that such projects should not conflict with the competition rules of the Treaty of Rome.

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The initial programme of investigation was called the FAST programme (Forecasting and Assessment in Science & Technology) which started in 1978 and centred on three principal sectors: information technology, biotechnology and the transformation of work and employment. This was followed in 1983 by the FAST II programme, which had a wider scope. The FAST programme led to the proposal by the European Commission and adoption by the Council of Ministers of a number of programmes to stimulate transnational cooperation in research and development. The principal programmes were concerned with information technology, industrial technologies and biotechnology, and are shown with their budgets in Exhibit I-1. The ESPRIT and RACE programmes are funded approximately 50 percent by the EEC budget, and 50 percent by industry.

EXHIBIT I-1

Principal EEC Research Programmes and Budgets

Programme		Budget $ Billions	Budget ECU Billion
ESPRIT	European Strategic Programme for Information Technology	1.7	1.5
RACE	Research and Development in Advanced Communications Technologies for Europe	1.7	1.5
BRITE	Basic Research in Industrial Technologies for Europe	0.138	0.125

In July 1987, the second Framework Research programme (1987-1991) was approved with budgets as shown in Exhibit I-2.

The EEC's programmes in research and development, and the other infrastructural programmes such as STAR and the Structural Funds (described in more detail in the rest of this section), are aimed at preparing the industries and economies of member states to be able to take advantage of the completion of the Internal Market in 1992.

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EXHIBIT I-2

Details of the Second Framework Research Programme and Budget, 1987-1991

Programme	Budget	
	$ Billions	ECU Billions
Quality of life	0.413	0.375
Towards a large market and an information and communications society	2.500	2.280
Modernisation of industrial sectors	0.930	0.845
Exploitation and optimum use of biological resources	0.308	0.280
Energy	1.290	1.170
Science and technology	0.405	0.368
Marine exploitation	0.088	0.080
Total	5.934	5.398

1.

ESPRIT

The ESPRIT programme has three objectives:

- to promote European transnational cooperation in information technology
- to provide the European information technology industry with the technologies it needs to meet the competitive requirements of the 1990s
- to contribute towards the development and implementation of international standards

Participation in ESPRIT is open to any organisation established and carrying out research and development in Information Technology within the EEC. ESPRIT projects are carried out by consortia which must include at least two industrial partners from two different member states of the EEC.

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The ESPRIT programme is implemented through precompetitive research and development projects based on the ESPRIT Work Programme, which describes the strategy, objectives and technical aspects of the programme work. Approximately once a year the programme is revised and published to serve as the basis for a Call for Proposals for projects in the five technology areas of the programme, which are:

- Advanced microelectronics
- Software technology
- Advanced information processing
- Office systems
- Computer-integrated manufacturing

The first phase of ESPRIT was adopted by the EEC in 1984, after a pilot phase initiated in 1983. Industry responded enthusiastically to the two principal calls for ESPRIT I proposals of 1984 and 1985, so much so that the budget available allowed only one proposal in five to be accepted. These two calls for proposals resulted in the start of 90 percent of all ESPRIT projects. A smaller, more focussed call for proposals in 1986 added another 20 projects, bringing to 227 the total number of ESPRIT I projects.

In spite of the success of this and other programmes, the commitment of the member states to fund these new programmes remained unconfirmed for a long time. The United Kingdom, in particular, blocked progress, possibly as a bargaining ploy towards the exercising of more budgetary control in the EEC, particularly in relation to the Common Agricultural Policy and the rebates for which Britain was negotiating. In July 1987, however, the Council of Ministers reached agreement on the Framework Programme and the European Commission submitted plans for ESPRIT II, the second phase of ESPRIT.

ESPRIT II continues to focus on precompetitive collaborative research and development, but there is stronger emphasis on the industrial nature of the programme. The programme aims to:

- provide a sustainable European capability in advanced components, especially application-specific integrated circuits

- provide the technologies needed for the next generation of information processing systems

- enhance the capability of European industry to integrate information technology into complete application systems in a broad range of different environments

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ESPRIT II will benefit from a full European dimension, with the participation of organisations based in EFTA countries. There will also be a cooperative action in basic research, aimed at developing and maintaining a sound foundation for the European information technology industry of the future.

The overall budget for ESPRIT II is $3.5 billion (ECU 3.2 billion), of which, as before, half is funded by industry and half by the EEC budget. A new feature of ESPRIT II is a limited number of Technology Integration Projects (TIPs). These projects will aim at ambitious, well-defined industrial targets, and will require large-scale industrial effort throughout the EEC.

The first call for proposals closed in April 1988. Of 650 proposals received, 158 were selected by the European Commission for participation in the project.

2. RACE

The aim of RACE is to develop a European Integrated Broadband Communications (IBC) environment as part of the world's telecommunications systems. The objective is to develop the technology base sufficiently to open up the options for future equipment and service developments, thereby limiting the risks for future investments in telecommunications infrastructure and services. By providing a common basis for work-sharing and cooperation, more optimal use will be made of scarce human and financial resources, and important contributions will be made towards standardisation.

The work proposed for the RACE definition phase is divided into two parts:

- the development of an integrated broadband communications reference model

- exploratory research and development in selected key areas

The principal areas selected for research and development are:

- high-speed integrated circuits
- high-complexity integrated circuits
- integrated optoelectronics
- broadband switching
- passive optical components
- components for high bit rate long haul links
- dedicated communications software
- large area flat panel display technology

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3. BRITE/EURAM

The BRITE (also known as the European Advanced Materials EURAM) programme is a four-year programme (1985-88) organised and financed on the ESPRIT model, to encourage the development and spread of new technologies, new processes of manufacture and new products in the traditional sectors (which still account for three-quarters of industrial employment).

The programme has two sections. One is devoted to basic technologies applicable to various industries, including assembly techniques, improving product reliability, reducing wear and tear, new computerised testing methods, and membrane and particle technology. The other section covers flexible materials and products, especially those used in the textile, leather and household goods industries.

The Research Council held on June 29, 1988 (at the end of the German Presidency), led to the adoption of five EEC research programmes, of which the budgets are shown in Exhibit I-3. The first two of these are application programmes, in which information technology will be an important ingredient.

EXHIBIT I-3

Research into Advanced Materials and Budget

Programme		Budget	
		$ Billions	ECU Billions
DRIVE	Dedicated Road Infrastructure for Vehicle Safety in Europe	66	60
DELTA	Development of European Learning through Technological Advance	22	20
BCR	Applied Metrology and Chemical Analysis	66	60
SCIENCE	Stimulation of the International Cooperation and Interchange Needed by European Research Scientists	184	167
Biotech-nology	(Revising the previous programme and budgeting an additional amount)	22	20

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DRIVE foresees a common European road transport environment, where drivers are better informed and "intelligent" vehicles interact with the road infrastructure. Traffic management and safety systems are integral DRIVE objectives. The programme seeks to create the conditions for developing an integrated road transport environment, through precompetitive and collaborative research and development in the fields of information technology and telecommunications. DRIVE will entail research, development and assessment of a whole range of technologies, the evaluation of candidate systems, and considerable standardisation work.

As with most EEC research programmes, DRIVE is based on a directed work plan drawn up by the European Commission in conjunction with industry. The work plan comprises analysis of traffic accident data, transmission technologies (microwave, infrared, radio etc.), and message and signalling systems.

DELTA will support work-enabling technologies emerging from other EEC programmes and will be utilised for educational applications. Devices and technologies to be dealt with include more powerful processors, including image processing; larger and lower-cost storage, with new techniques for data organisation; direct broadcasting by satellite; the integrated services digital network (ISDN); artificial intelligence; and access by near natural language.

4. EUREKA

In 1985, the governments of 18 European countries (from the EEC, Norway, Sweden, Finland, Switzerland, Austria, Iceland and Turkey) and the European Commission, as a result of an initiative led by President Mitterand of France, launched the EUREKA programme. EUREKA is a framework for promoting collaborative projects in Europe in the fields of advanced technology. Although initially conceived as a response to the "star wars" research programme of the U.S., the scope is a little wider, and initial research is related to information technology, telecommunications, industrial robotics, materials, advanced manufacturing, biotechnology, marine technology, and lasers, as well as environmental protection and transport technologies.

EUREKA has nothing to do with the EEC or its funds, but is a series of joint research projects that includes members of the EEC. The total number of projects launched under the umbrella of EUREKA now numbers 214, with total funding of $4.2 billion (ECU 3.8 billion).

Significant EUREKA programmes are concerned with digital cartography, high definition television, data networking, and image processing.

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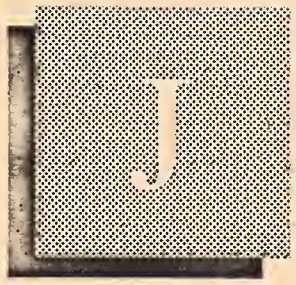
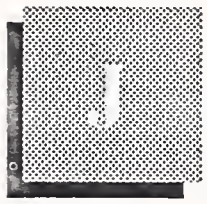


Appendix: European Commission Initiatives—Infrastructure Programmes



Appendix: European Commission Initiatives—Infrastucture Programmes

The European Commission has launched a number of infrastructural programmes to aid itself, member state governments and the EEC at large to operate more efficiently in the EEC environment. Principal amongst these programmes are INSIS (the EEC's Inter-Institutional Information System), EUROTRA, translation by computer between all languages of the EEC, CADDIA (cooperation in Automation of Data and Documents) and TEDIS, the Trade Electronic Data Interchange System.

INSIS is a system for management and information exchange between member states' governments and EEC institutions, including the European Commission and the European Parliament. It provides for text transmission, an electronic message system, access to information and data of interest to the EEC, and conference systems. Complementary to INSIS is OVIDE, a videotex database for the use of the European Parliament.

The objective of EUROTRA is to overcome language barriers so that the benefits of information technology and information networks can be fully reaped at an EEC level. The programme started in 1982 with funding of $18 million (ECU 16 million). A further $12 million (ECU 11 million) was forecast for the additional incorporation of Spanish and Portuguese, but of this only $50 million (ECU 4.5 million) has been approved so far. After a two year preparatory phase, the programme has moved into a basic and applied linguistic research phase. A system for the pretranslation of texts (SYSTRAN) of less advanced design exists, and is already in use for a number of EEC languages. This was developed in the U.S., and the European Commission acquired rights to it in 1976. This system will ultimately be abandoned.

CADDIA is an action plan to provide a comprehensive data interchange system to cope with the complex and costly paperwork which constitutes a serious obstacle to the free flow of national and cross-border trade. The plan has three fundamental objectives:

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- automation by member states and the European Commission of the data interchange and processing required by management of the Customs Union, the EEC's commercial measures, management and financial control of agricultural markets, and procedures for collection and dissemination of statistical data on EEC trade

- coordination of similar actions by national administrations to ensure technical compatibility in the establishment of the necessary telematic infrastructure

- aligning EEC developments with those currently under way in the industrial and commercial sectors of world trade

1. TEDIS

TEDIS is a programme launched by the European Commission to provide a focus for EEC action in the field of data interchange systems. If 700 documents are to be replaced by a Single Administrative Document in the EEC of 1992, the document will have to be electronic; otherwise the Single Market will be operated on outdated technology. What is more, the electronic interchange of data within the EEC will make it possible to abolish not only customs barriers, but language barriers, provided that the dialogue is based on a specific code.

The aims of the TEDIS programme are:

- to coordinate, at EEC level, the work going on in the various member states

- to alert European hardware and software operators to the opportunities offered by electronic data exchange

- to provide logistic support for European sector groups

- consideration of the specific requirements of trade electronic data interchange within member states, and between the member states and the EEC, in telecommunications and standardization policies, carrying out preparatory work for that purpose

- to help in the setting-up of conformance testing centres for software and hardware used in trade electronic data interchange systems

- to seek solutions to legal problems that might inhibit the development of trade electronic data interchange and to see to it that restrictive telecommunications regulations cannot hamper the development of trade electronic data interchange

- to study security requirements for trade electronic data interchange systems so as to guarantee confidentiality of messages transmitted

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- to study specific problems caused by the multiplicity of languages in the EEC and, to this end, to examine the possibility (for the purpose of multilingualism) of using the results obtained or expected under the machine translation programmes SYSTRAN and EUROTRA

- to study the advisability of promoting the development of the specialized software needed for trade electronic data interchange

- to list existing or potential sector projects on trade electronic data interchange and to make a comparative analysis of them

- to identify special requirements emerging during the implementation of trade electronic data interchange systems that could be met most easily, with EEC assistance

- to make a particular study of the assistance that could be given to small and medium sized businesses to help them take an active part in trade electronic data interchange

- to give thought to possible support for pilot projects, the gradual implementation of which would be likely to encourage solutions, capable of being generalized, to problems of common interest encountered by most trade electronic data interchange systems

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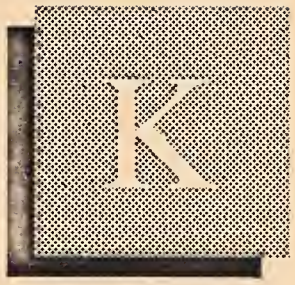
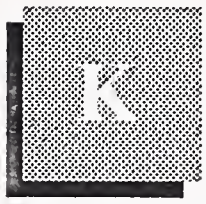


Appendix: European Commission Initiatives—Regional Development Programmes



Appendix: European Commission Initiatives—Regional Development Programmes

The EEC has for a long time budgeted funds for the purpose of developing the less well-developed areas of the EEC. As 1992 approaches, these funds are being significantly increased and supplemented in order to prepare the less-developed areas to take advantage of the Common Market by developing their communications and telecommunications infrastructures.

The EEC's Structural Funds, administered by the European Commission, are intended to support investment in industry and agriculture in the less-developed regions of the EEC. There are three funds—The European Regional Development Fund (ERDF), The European Social Fund (ESF), and The European Agricultural Guidance and Guarantee Fund (EAGGF).

In February 1988, the European Council agreed to increase the Structural Funds' annual budget from $9 billion (ECU 8 billion) to $17 billion (ECU 15 billion) by 1992, leading to doubling by 1993, and to concentrate the bulk of the extra resources on Portugal, Greece, the Republic of Ireland, and parts of Spain and Italy. These regions will probably receive 60 to 70 percent of the total funds, and will have their share doubled by 1992.

Aligned to the Structural Funds are the Integrated Mediterranean Programmes (IMPs), established in 1985 to develop the Mediterranean areas of Greece, Italy and France. The programmes are financed from Structural Funds, from European Investment Bank loans and from a special Community Budget line. The European Council also agreed in February 1988 to a special five-year programme for the modernisation of Portuguese industry (PEDIP), financed by grants from the Structural Funds, a PEDIP budget line, and loans from the European Investment Bank.

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The increase in Structural Funds should provide valuable opportunities for the industries of other member states, both in preliminary work (advising authorities on the preparation of suitable programmes and projects to be presented to the European Commission for approval) and in project management and implementation. Typical projects will be for roads, railways, telecommunications, power supply, water works and sanitation, construction, factory equipment, the development of tourism, training facilities and consultancy.

Very important amongst the Structural Funds is the STAR programme (Special Telecommunications Actions for Regional Development), which aims to develop the telecommunications infrastructures in the less highly-developed member states. Seven broad areas are eligible for funding, as follows:

- preparing local or regional programmes for telecommunications use
- establishing and operating publicity and information campaigns
- demonstrating the advantages of using advanced services
- encouraging small and medium-sized enterprises to use advanced services
- establishing and developing telecommunications service centres
- implementing experimental distance working projects
- providing specialized regional information services

The EEC share of this programme amounts to $864 million (ECU 785 million) over 5 years, member states contributing an additional 45 percent.

One special feature of the STAR programme is that it is a technological programme financed by the Regional Development Fund, which gives it a pioneering quality. It represents a clear-cut policy and strategy specifically conceived for the less favoured areas of the EEC.

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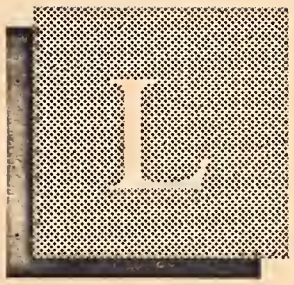

Appendix: European Commission Initiatives—Small and Medium Enterprises Programmes

I.

Appendix: European Commission Initiatives—Small and Medium Enterprises Programmes

Many countries have recognized that the growth of employment depends largely on a thriving infrastructure of small and medium-sized enterprises (SMEs). Indeed, many large companies in recent years have shown increasing turnovers and a reduction in work force. Some countries have chosen to stimulate the growth of small companies by legislative means (for example, in the U.S. through the Small Business Act).

The European Commission felt the need to give an EEC dimension to the initiatives on developing SMEs and to provide a means for exchange of experience and for coordination with member states' policies, and harmonisation in a field where indirect public action (affecting the institutional and cultural environment in which firms operate) is more important than direct subsidy.

The guidelines for EEC action are derived from the following approach:

- identification of problems which European business faces, in terms of the creation of firms and their development
- setting objectives for EEC action so as to make a positive contribution to solving these problems and meeting these needs
- in light of the resources available, formulation of coherent, prioritized plan of projects and actions, and the order of their implementation

The studies carried out by the European Commission brought out three principal needs, which are as follows:

- the need for an administrative environment sufficiently simple and open not to handicap firms in terms of costs and profitability

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- improved availability of capital for SMEs to enable rapid introduction of new technologies into production processes (this applies just as much to traditional industries as to high technology and service sectors)

- preservation of flexibility as a basic factor in adapting to demand and to the competitive challenges of the market; in particular this requires information to be quick and effective, and training to be tailored to an SME's special needs

In response to this need, the European Commission set up, in June 1986, the SME Task Force as part of Directorate General III—"Internal Market & Industrial Affairs." The Action Programme is in two parts. The first part sets out to provide a favourable business environment for SMEs by:

- encouraging the spirit of enterprise with suitable training programmes

- improving the administrative environment, in particular by scrutinising all EEC legislation, current and past, to ascertain its impact on the business environment for SMEs

- monitoring the progress towards completion of the Internal Market, with a view to helping SMEs in particular; providing SMEs access to public sector procurement; and to procuring special treatment for SMEs in the legal environment

- ensuring that the proposals on tax matters put forward by the European Commission are favourable and not restrictive to SMEs

- improving the social environment of SMEs, in particular to ensure that social legislation does not increase the cost burden on SMEs

The second part is designed to respond directly to the specific needs of SMEs by giving priority to schemes concerning capital formation and the achieving of a high degree of flexibility in adapting to and anticipating markets. Six projects were chosen, as follows:

- training and the funding of training, in particular training in new technologies and for management

- information, in particular the establishment in all member states of "Community Information Centres"

- exports, by facilitating SME's access to markets in non-member countries,

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- the creation of business and innovation, in particular the extension and integration of "Business Innovation Centres"

- the fostering of interfirm and interregional cooperation, in particular establishing a European computerised Business Cooperation Network (BC-NET) to develop subcontracting networks, and to encourage partnerships between large firms and SMEs

- to facilitate access of SMEs to finance to help them operate on a European scale

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